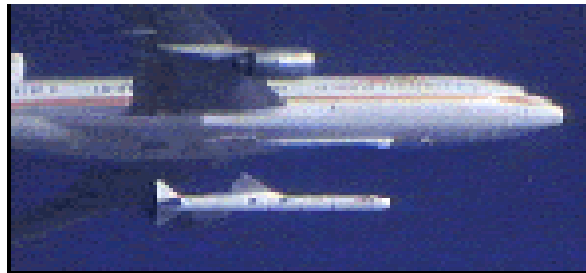




John F. Kennedy Space Center

LAUNCH SERVICES PROGRAM



Pardon the Interruption Meeting September 2008



September 18, 2008

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GLORY Project Summary

OVERALL MISSION

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | G |

LAUNCH SERVICES PROGRAM



| | |
|----------------------|----------------|
| Mission | GLORY |
| Launch Date | 2009/06/15 |
| Launch Vehicle | Taurus |
| Launch Period Window | TBD |
| PPF | Commercial PPF |

MISSION MANAGEMENT

| | Jul | Aug | Sep |
|---------------------|-----|-----|-----|
| Observatory Status | 0 | 0 | R |
| Manifest/Range | 0 | 0 | G |
| Integrated Schedule | 0 | 0 | G |
| ICD | 0 | 0 | G |
| CDRLs (S/C & LSC) | 0 | 0 | G |

LAUNCH SITE

| | Jul | Aug | Sep |
|--------------------|-----|-----|-----|
| LSSP | G | G | G |
| Customer Inputs | G | G | G |
| PPF | Y | G | G |
| Launch Site Unique | G | G | G |
| Spacecraft OPS | G | G | G |

SAFETY & MISSION ASSURANCE

| | Jul | Aug | Sep |
|-------------------|-----|-----|-----|
| Mission Assurance | G | G | G |
| Safety | G | G | G |
| Quality | Y | Y | Y |
| Reliability | G | G | G |

ENGINEERING

| | Jul | Aug | Sep |
|---------------------|-----|-----|-----|
| Launch Vehicle | G | 0 | G |
| Mission Specific | G | 0 | G |
| Certification | G | 0 | G |
| Mission Analysis | G | 0 | G |
| ERS/ERB | G | 0 | G |
| Launch PAD/GSE | G | 0 | G |
| Mission Unique IV&V | 0 | 0 | N/A |

COMM & TELEMETRY

| | Jul | Aug | Sep |
|----------------|-----|-----|-----|
| Communications | G | G | G |
| Telemetry | 0 | 0 | 0 |

BUSINESS

| | Jul | Aug | Sep |
|-----------|-----|-----|-----|
| Budget | R | R | G |
| Contracts | G | G | 0 |

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

| |
|-----|
| G |
| Y |
| R |
| 0 |
| N/A |

DOWNRANGE TELEMETRY

| | Jul | Aug | Sep |
|-----------------|-----|-----|-----|
| Ground Stations | 0 | 0 | N/A |
| Deployables | 0 | 0 | N/A |
| P-3/OTTR | 0 | 0 | Y |

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GLORY - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

| | | Condition |
|-----------|--------|--|
| RYG Trend | RiskID | Consequence |
| R | V0059 | Taurus XL Certification Schedule may not meet the OCO launch date. (P=2, I=5) |
| | | Hinge failure results in loss of mission. |
| Y | V0060 | Taurus XL - Stg 1 Electronic Control Unit (ECU) was not thermally qual'd or ATP'd and could overheat. (P=2, I=5) |
| | | Failure of ECU results in loss of mission. |
| Y | V0062 | Taurus conducted ripple emissions environment has unknown margin. (P=2, I=5) |
| | | Degraded flight hardware operations or loss of mission. |
| R | V0063 | Taurus Stg-0 TVC Actuator not qualified for dynamic environment or accepted for sine vbe environment. (P=3, I=5) |
| | | Failure of Stg-0 TVA causes loss of mission. |

P
R
C
B

C
F

C
C
C
U
R
R
E
N
C
E

5
91-100%
4
51-90%
3
11-50%
2
6-10%
1
1-5%



1 2 3 4 5

IMPACT

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GLORY - Significant Events

LAUNCH SERVICES PROGRAM

| Accomplished | |
|---|-----------------------|
| Received update SC model and LSP is performing a base drive analysis. Inputs for LSG received 4/16/2007. Inhouse done and in-work comparing results to LSG and Swales analysis. Difficulties getting data to GSFC | 1/31/07-07/31/2007 |
| Master ICD, EICD (with ICP001), and MICD (with ICP001) baselines have been signed. | 06/25/2007-10/26/2007 |
| Contract Mod for ballast ring turned on | 06/22/2007-7/24/2007 |
| PMA inputs received. PMA has been recieved by LSP and S/C. Currently in review. LSP review is complete and has been recommended to MIM for release (TOD) to Glory. | 8/23/07-11/26/2007 |
| MIWG/GOWG at VAFB, delayed from Nov due to uncertainty on PPF processing location. MIWG to be held at GSFC on Nov 28. MIWG 4 held at GSFC on November 28. Meeting was successful. Targeted next GOWG for February 13th. | 11/28/07-11/28/07 |
| T8/T9 MUCDR is complete and the board concurred with the design and proceed to manufacturing of the ballast ring. Two significant actions were assigned: Assess s/c sensitivity to any ECS impingement due to the ballast ring implementation (ref ERS 08 | 1/31/08-1/31/08 |
| Next iteration of MU pad electrical upgrade expected. | 1/1/08-08/31/2008 |
| Shock test on bus level only has been eliminated at request of S/C | 12/7/07-10/17/2007 |

| Planned | |
|--|-----------------------|
| Glory GOWG placed on hold until PPF selected. PPF selection occurred on 8/7/2008 which supports the scheduled GOWG date of 10/22/2008-10/23/2008. IBEX launch date may cause slip to this date | 05/06/2008-10/23/2008 |
| S/C Validated FEM delivery | 11/30/2008-11/30/2008 |
| Support S/C shock test and fit check. Testing moved out to accomodate re-baseline of Glory environmental tests. Current estimate is mid-october. Procedure in review | 04/14/2008-10/31/2008 |
| Glory has requested to perform testing on the OCO Isolators. LSP Place LSG on contract to support and have CSA conducts analyses on the isolator. | 9/2/08-09/30/2008 |

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| | |
|--|-----------------------|
| CLA mission analysis for all 3 requested load cases using the old model were received and sent to s/c in support of their environmental test review for the instrument. | 8/25/07-8/28/07 |
| T8/T9 MUSAR | 08/25/2008 |
| S/C thermal model (8k nodes) to be delivered to LSG this month. Received spacecraft thermal analysis. LSP reviewed and concurred with analysis after some minor tweaks. Forwarded to LSG. | 08/01/2007-11/07/2007 |
| CLA with the new s/c model (received Oct 16 2007) is complete. The CLA has been delivered to LSP and is in review; expected to be delivered to s/c next week. | 11/07/2007-01/31/2008 |
| SOW approved for use of PPODS on OCO/Glory missions. Kickoff meeting completed. Successfully presented PPOD/CubeSat orbital affects to the A-Train MOWG. | 08/24/2007-03/05/2008 |
| Received payload processing proposals and evaluated them. Discussions with offerors in response to questions generated scheduled for w/o 9/10. | 9/5-9/7 |
| ERB for Softride for T8/T9 delayed until December 11th due to the requirement for additional technical details in the ERB package. Agreement reached between technical team (LSP, LSG, CSA) on required inputs for ERB. Ready to proceed to ERB on 12/11 | 11/29/2007-12/11/2007 |
| Glory project Pre-Environmental Review - approved Project to proceed with Environmental testing. | 02/05/2008-03/05/2008 |
| Preliminary Sep Analysis from LSG has been reviewed and approved by LSP. It has been released to Glory and added to Tech Doc. | 10/17/2007-12/04/2007 |
| S/C thermal model (8k nodes) to be delivered to LSG this month. Received spacecraft thermal analysis. LSP reviewed and concurred with analysis after some minor tweaks. Forwarded to LSG. | 08/01/2007-11/07/2007 |

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| | |
|--|-----------------------|
| Deliver first revision of LSP Verification Matrix to GSFC Glory project at thier request | 01/01/2008-02/22/2008 |
| OCO & Glory Mission Unique System Level Design Review | 07/30/2008-07/31/2008 |
| Glory PPF Contract awarded to Astrotech Space Operations | 8/7/2008-8/7/2008 |



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GLORY Mission Management

Garrett Skrobot

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

| |
|-----------------------------------|
| GLORY |
| 2009/06/15 |
| <695 km/98.189 degree inclination |
| Taurus |
| TBD |
| Commercial PPF |
| 528 kg (TB |
| 567E |

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | R |
| 0 | 0 | Y |
| R | R | G |
| 0 | 0 | G |
| 0 | 0 | Y |
| 0 | 0 | G |
| 0 | 0 | Y |

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

| |
|-----------------|
| GSFC |
| ESSP |
| Bryan Fafaul |
| John Satrom |
| Garrett Skrobot |
| Sarah LeValley |
| Mark Mertz |
| Ken Carr |
| Laura McDaniel |
| Mike Patton |
| Nathan Wood |



ICD

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | G |

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

| | | |
|---|---|-----|
| 0 | 0 | G |
| 0 | 0 | G |
| 0 | 0 | G |
| 0 | 0 | N/A |
| 0 | 0 | N/A |
| 0 | 0 | Y |

| SIGNED SCNS: | | SCNS IN REVIEW | |
|--------------|-------------|----------------|-------------|
| SCN # | DATE SIGNED | SCN # | DATE SIGNED |
| MICD ICP1 | 10/10/2007 | ICP6 | |
| EICD ICP1 | 12/07/2007 | ICP7 | |
| ICP 1 | 12/17/07 | ICP8 | |
| ICP2 | 12/17/07 | MICD ICP2 | |
| ICP3 | 07/01/2008 | | |
| ICP4 | 2/7/08 | | |
| ICP5 | 1/3/08 | | |

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GLORY - Engineering

Sarah LeValley

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|--------------------------------|-----|-----|-----|
| Launch Vehicle | G | 0 | G |
| Payload Fairing | G | 0 | G |
| First Stage | G | 0 | G |
| Second Stage | G | 0 | G |
| Third Stage | G | 0 | G |
| Payload Attach Fitting | G | 0 | G |
| Other | 0 | 0 | N/A |
| Mission Specific | G | 0 | G |
| Certification | G | 0 | G |
| Mission Analysis | G | 0 | G |
| ERS/ERB | G | 0 | G |
| Launch PAD/GSE | G | 0 | G |
| Mission Unique IV&V | 0 | 0 | N/A |

| REQUIREMENT VERIFICATION STATUS | |
|---------------------------------|---|
| NUMBER OF REQUIREMENTS | 0 |
| VERIFIED TO DATE | 0 |

| LAUNCH PAD / GSE MODS (IF APPLICABLE) |
|---------------------------------------|
| There are none. |

| MISSION UNIQUE STUDIES (IF APPLICABLE) |
|--|
| There are none. |

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GLORY - Mission ERB Status

Sarah LeValley

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|--------|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| G | 05-381 | GLORY Spacecraft Questionnaire | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| G | 07-80 | Incorrect Holes Drilled in Critical GSE Separation Test Ring | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| G | 07-189 | T8/T9 Ballast Ring MUPDR | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-259 | Glory ICD Review | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-302 | T-0 purge for Glory and OCO | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-173 | Taurus T8/T9 Softride Isolators | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-190 | Taurus T8/T9 MUCDR | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-191 | Taurus T8/T9 MUSAR | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 06-328 | OCO/Glory EGSE Electrical Harness Pad Upgrade | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-20 | Glory ECS impingement on APS Earth Shield | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-21 | Glory PCLA (rev A) lateral/axial coupling | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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GLORY - Vehicle ERB Status

Sarah LeValley

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|--------|--|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| G | 05-052 | SBS/OR Heritage Flight Computer Life Extension | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 04-460 | Pegasus-TVC lot 10 cap failure power board | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 06-113 | Safe and Arm, Detonator Anomaly | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-069 | S&A Failure to Rotate | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-076 | Orion Motor Case Resin Requalification | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-113 | Safe & Arm (New Build) Process Review | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-144 | Orion Motor Nozzle Rayon Replacement | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| G | 07-169 | Taurus - TDRSS Transmitter PDR (LCT2 Xmtr) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-328 | 7Ah Avionics Battery, Taurus First Flight, OCO/Glory | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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GLORY - Launch Site

Mark Mertz

LAUNCH SERVICES PROGRAM

LSSP

Jul Aug Sep

| | | |
|---|---|---|
| G | G | G |
|---|---|---|

| LSSP | Planned | Released |
|-------------|---------|----------|
| Preliminary | 07/2007 | 7/2007 |
| Baseline | 11/2008 | |

CUSTOMER INPUTS

Jul Aug Sep

| | | |
|---|---|---|
| G | G | G |
|---|---|---|

DELIVERABLES

Jul Aug Sep

| | | | |
|-----------------------------|---|---|---|
| Security and Badging | G | G | G |
| Training and Personnel Cert | G | G | G |
| Contingency Plans | G | G | G |
| Safety LSIM | G | G | G |
| Radiation Control | G | G | G |
| Operational Plans | G | G | G |

UNIQUE REQUIREMENTS

LAUNCH SITE UNIQUE

Jul Aug Sep

| | | |
|---|---|---|
| G | G | G |
| 0 | 0 | G |

PPF

Commercial PPF

| | | |
|---|---|---|
| Y | G | G |
| Y | G | G |

Spacecraft OPS

| | | |
|---|---|---|
| G | G | G |
|---|---|---|

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GLORY Budget Breakdown

Ken Carr

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility
-

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

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^a **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.



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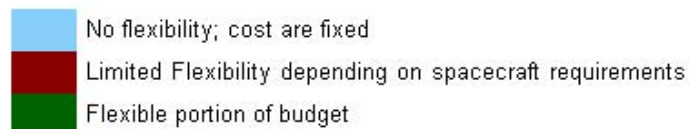
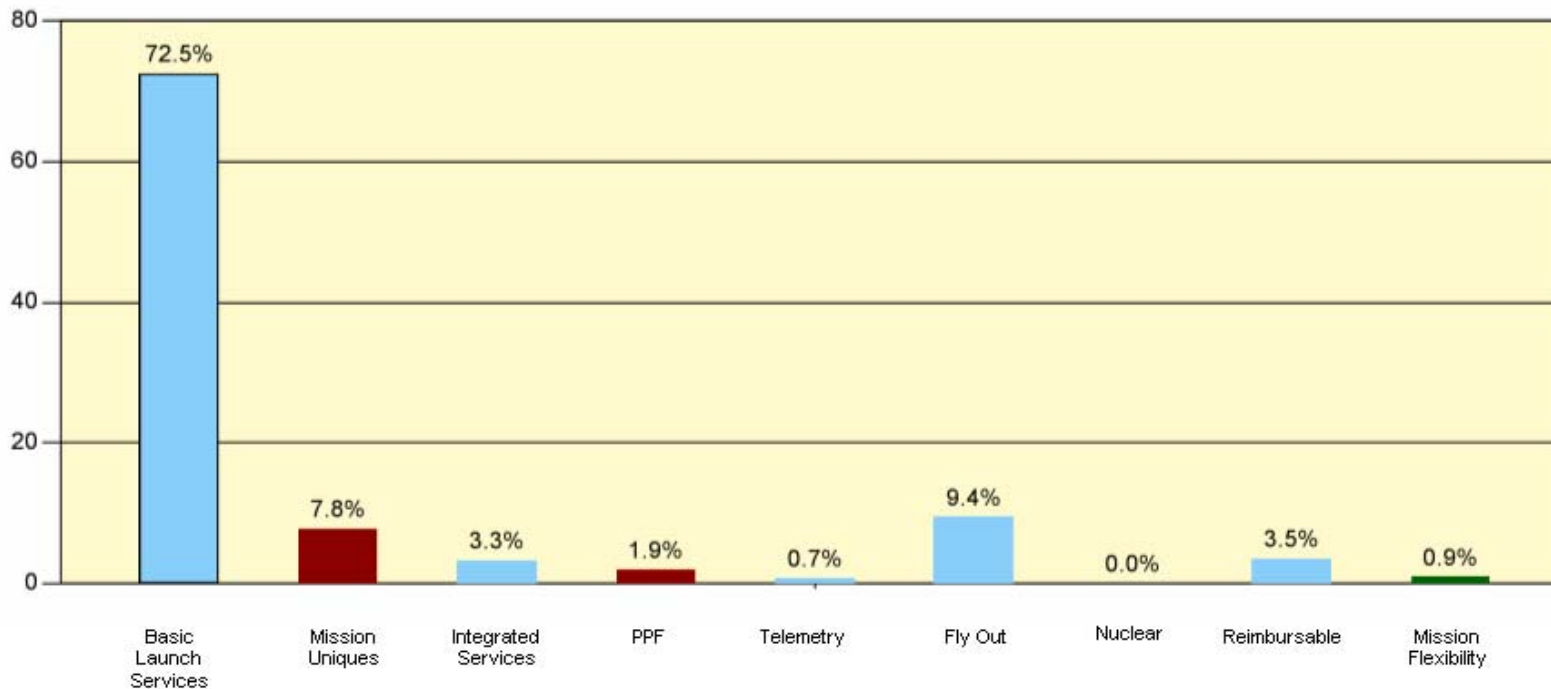
Launch Services Budget Breakdown

GLORY Mission

Ken Carr

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 9 / 2008



Notes:

Variance: Significant increases in Mission Flexibility due to reduction in liens for PPF and Telemetry and removed lien for additional shock test.

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GLORY - Business

Ken Carr

LAUNCH SERVICES PROGRAM

Budget

Contracts

| Jul | Aug | Sep |
|-----|-----|-----|
| R | R | G |
| G | G | 0 |

| Milestone | Date |
|--------------|------------|
| Milestone 1 | 11/15/2005 |
| Milestone 2a | 02/15/2006 |
| Milestone 2b | 06/15/2006 |
| Milestone 3a | 10/15/2006 |
| Milestone 4 | 03/15/2007 |
| Milestone 5 | 08/15/2007 |
| Milestone 6 | 11/15/2007 |
| Milestone 7 | 06/15/2008 |
| Milestone 8a | 09/15/2008 |
| Milestone 8b | 11/15/2008 |
| Milestone 9 | 02/15/2009 |
| Milestone 3b | 12/15/2006 |

| | |
|--------------------------|---------------------------|
| <input type="checkbox"/> | Open Milestone Payment |
| <input type="checkbox"/> | Paid Milestone |

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| Contract Status | | | | |
|----------------------------------|---|--|-----------------|-------------------|
| Launch Services | | | | |
| Contract Mod | Number | Description | | |
| | 17 | NSS Intrument purge & Payload Isolation System | | |
| | 22 | Ballast Ring for launch vehicle | | |
| | 33 | GLORY Safe & Arm Ordnance rework | | |
| There are no LD Contract Mods | | | | |
| Task Assignments | Number | Description | Completion Date | Invoice Paid Date |
| | SP-01 | Taurus Isolation Random Vibe Environment | | |
| There are no PPF Contract Mods | | | | |
| There are no Other Contract Mods | | | | |
| | Issues | | | |
| 0 | Launch Service budget is green, but due to Spacecraft budget issues the chart reflects a red. This is an issue with MIRS that drives the business section when the spacecraft budget section is modified. | | | |



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GLORY - Safety and Mission Assurance

Laura McDaniel

LAUNCH SERVICES PROGRAM

| Assurance Verification Areas | Status | | Evidence of Completion | Jul | Aug | Sep |
|-------------------------------------|--------------------------|-------------------------------------|--|-----|-----|-----|
| | Complete | In Work | | | | |
| Quality | | | | Y | Y | Y |
| Software / Hardware Problems | <input type="checkbox"/> | <input checked="" type="checkbox"/> | The Taurus vehicle is under certification efforts by LS SMA and NASA LSP. Due to outstanding Data Requests for Taurus vendors from previous site visits, all hardware and software fabrication operations are not fully certified. | Y | Y | Y |
| Alerts | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |
| Audits/Inspections/Surveillances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | SMA continuing to follow the closure of the MDA audit findings against Pac Sci. | Y | Y | Y |
| Limited Life Items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |
| Reliability | | | | G | G | G |
| FMEA/Fishbones/Equivalent | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Failure analyses assessments have been initiated along with vehicle certification planning | G | G | G |
| Reliability Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | The revised DRR was expected before 6/15/08. | G | G | G |
| Safety | | | | G | G | G |
| Requirements Definitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ICD & Safety documentation tailoring in work | G | G | G |
| Range Safety & Mission Flight Rules | <input type="checkbox"/> | <input checked="" type="checkbox"/> | In-work (Range Safety) | G | G | G |
| Licenses/Use Authorizations | <input type="checkbox"/> | <input checked="" type="checkbox"/> | In-work | G | G | G |
| Safety Documentation | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Range Safety Identified Potential Noncompliance (Nov.13.2006): Orbital has addressed (5-18-07) the potential non-compliances as well as other general items and is keeping the pace in resolving these important issues. | G | G | G |
| Non-compliances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | S/C: ELS submitted for hydrazine propellant tank burst test issue; Range Safety Waiver to be written for spacecraft contingency offload; SMA input added to ELV Risk M0281 for OCO & Glory (Taurus). | G | G | G |
| Contingency Planning | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues (no planning required at this time) | G | G | G |
| Mission Assurance | | | | G | G | G |
| Lessons Learned | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No previous NASA Taurus missions - Other KSC LL's will be reviewed/addressed | G | G | G |
| First Flight/Mission Unique Items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Certification Effort in work | G | G | G |
| Test/Qualification/Certification | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Certification Effort in work | G | G | G |

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Mission Assurance Assessments

☐

Risk Management

☐☒

No issues

☒

Risk Management System is working properly

| | | |
|---|---|---|
| G | G | G |
| G | G | G |



John F. Kennedy Space Center

GLORY Comm & Telemetry

Mike Patton and Nathan Wood

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

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NOAA-N' (Prime) Project Summary

OVERALL MISSION

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |

LAUNCH SERVICES PROGRAM

| | |
|----------------------|-----------------|
| Mission | NOAA-N' (Prime) |
| Launch Date | 2009/02/01 |
| Launch Vehicle | Delta II |
| Launch Period Window | TBD |
| PPF | 1610 |



MISSION MANAGEMENT

| | Jul | Aug | Sep |
|---------------------|-----|-----|-----|
| Observatory Status | G | G | G |
| Manifest/Range | G | G | G |
| Integrated Schedule | G | G | G |
| ICD | G | G | G |
| CDRLs (S/C & LSC) | G | G | G |

LAUNCH SITE

| | Jul | Aug | Sep |
|--------------------|-----|-----|-----|
| LSSP | G | G | G |
| Customer Inputs | G | G | G |
| PPF | G | G | G |
| Launch Site Unique | G | G | G |
| Spacecraft OPS | G | G | G |

SAFETY & MISSION ASSURANCE

| | Jul | Aug | Sep |
|-------------------|-----|-----|-----|
| Mission Assurance | 0 | Y | Y |
| Safety | 0 | G | G |
| Quality | 0 | Y | Y |
| Reliability | 0 | G | G |

ENGINEERING

| | Jul | Aug | Sep |
|---------------------|-----|-----|-----|
| Launch Vehicle | G | G | G |
| Mission Specific | G | G | G |
| Certification | N/A | N/A | N/A |
| Mission Analysis | G | G | G |
| ERS/ERB | G | G | G |
| Launch PAD/GSE | G | G | G |
| Mission Unique IV&V | N/A | N/A | N/A |

COMM & TELEMETRY

| | Jul | Aug | Sep |
|----------------|-----|-----|-----|
| Communications | G | 0 | G |
| Telemetry | 0 | 0 | 0 |

BUSINESS

| | Jul | Aug | Sep |
|-----------|-----|-----|-----|
| Budget | G | G | G |
| Contracts | G | G | G |

LEGEND

Proceeding on Plan
 Area of Concern
 Significant Problem
 Not Evaluated
 Not Applicable

| |
|-----|
| G |
| Y |
| R |
| 0 |
| N/A |

DOWNRANGE TELEMETRY

| | Jul | Aug | Sep |
|-----------------|-----|-----|-----|
| Ground Stations | G | G | G |
| Deployables | 0 | 0 | 0 |
| P-3/OTTR | 0 | Y | Y |

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NOAA-N' (Prime) - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

| | | Condition |
|-----------|-----------|--|
| RYG Trend | RiskID | Consequence |
| 0 | V0050 | Dawn experienced a significant delay very late in the hardware production process that delayed the launch readiness date. The same contributing causes exist for other NASA missions. In addition, ULA just in time delivery approach provides little margin to hardware need dates. |
| | | Late production of LV hardware causes a slip in the launch date. |
| 0 | P0018 (A) | Traditional DMCO Testing (Bldg AO on CCAFS) on Commercial and NASA Delta II launch vehicles will be eliminated. Required testing that has historically been performed in DMCO will be transferred to the launch pad as part of the DMCO On-Pad Initiative. |
| | | Elimination of traditional DMCO Testing will not allow for capturing hardware failures off-pad and thus introduce potential for on-pad schedule delays of more than one key milestone if hardware fails during pad testing. |
| 0 | P0008 (A) | The current NLS statement of work for SLC-2 places approval authority for all changes to pad maintenance in the Contractor's hands, and specifically excludes NASA approval. |
| | | Reduced maintenance levels may results in equipment failure that forces NASA to fund unplanned repairs or replacements. |

P
R
C
B

C
F

C
C
C
U
R
R
E
N
C
E

5
91-100%
4
51-90%
3
11-50%
2
6-10%
1
1-5%



1 2 3 4 5
IMPACT

| | | |
|---|-------|---|
| 0 | V0057 | Condition: During Accelerated Age Testing (AAT) on September 28, 2007, a Gas Generator (GG) tipped Thin Layer Explosive (TLX) line from lot UCO07001-002 failed to produce an output. |
| | | Consequence: Failure of the GG TLX to produce an output will cause all six ground ignited GEM's to remain attached to the launch vehicle resulting in mission failure. |



John F. Kennedy Space Center

NOAA-N' (Prime) - Significant Events

LAUNCH SERVICES PROGRAM

| Accomplished | |
|--|-----------------------------|
| Final Payload Compatibility Drawing released | 15 June 06 |
| Draft Preliminary LSSP distributed | 2 March 06 |
| PAF to GS fitcheck at Decatur | 12 July 06-13 July 06 |
| RF Hazard Analysis | 22 May 06 |
| ICD Released | 21 June 06 |
| ARAR Initial Release | 28 Feb 07 |
| MIWG #5 / GOWG #2 at SLC-2 B1628 | 20 mar 07-20 Mar 07 |
| Launch moved to Feb 1, 2009 | 31 Jan 07 |
| Preliminary LSSP Release | 2 March 06-21 Dec 07 |
| Launch Base Integrated Ops Team TIM | week of 6/25-26 June 06 |
| PAF to GS fitcheck 2 at Decatur | 29 Aug 07-31 Aug 07 |
| ARAR Final Release | 28 Sept 07-18 Oct 07 |
| Launch Base Integrated Ops Team Meeting | Dec 07-10 Jan 08 |
| Payload to Blockhouse Wiring Diagram | 21 Nov 07-21 Apr 08 |
| VLC complete | 18 Dec 07 |
| GOWG at VAFB | 12-13 Mar 08-12-13 Mar 08 |
| SC officially in storage. | 5 Mar 08 |
| Release Baseline LSSP | May 08-Sep 08 |
| MIWG/GOWG in Denver | 22-23 July 08-22-23 July 08 |
| Launch Vehicle in storage | 2 Sep 08 |

| Planned | |
|-----------------------------|---------------------|
| Ground Operations Review | 2 Oct 08 |
| Launch Vehicle ship to VAFB | 1 Oct 08-3 Oct 08 |
| DTO reset | 26 Sep 08-10 Oct 08 |
| ICD Rev A | 15 Oct 08 |

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NOAA-N' (Prime) Mission Management

Dave Breedlove

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD



| |
|-----------------------------------|
| NOAA-N' (Prime) |
| 2009/02/01 |
| Alt./7237 km / Incl- 98.73 deg |
| Delta II |
| TBD |
| 1610 |
| (SC + PAF) |
| SLC-2 |

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

| |
|----------------|
| GSFC |
| NOAA - POES |
| Wayne McIntyre |
| Jerry Nagy |
| Dave Breedlove |
| Eric Poole |
| Tricia Fertig |
| Walner Thervil |
| Ken Hale |
| Ralph Mikulas |
| Mike Patton |

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| 0 | 0 | 0 |
| 0 | Y | Y |

ICD

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |

| SIGNED SCNS: | | SCNS IN REVIEW | |
|--------------|-------------|----------------|-------------|
| SCN # | DATE SIGNED | SCN # | DATE SIGNED |
| 001 | 09/29/2006 | 006 | |
| 002 | 09/29/2006 | 007 | in review |
| 003 | 09/29/2006 | | |
| 004 | 09/29/2006 | | |
| 005 | 09/29/2006 | | |
| 008 | 08/06/2007 | | |
| 009 | 08/08/2007 | | |

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NOAA-N' (Prime) - Engineering

Eric Poole

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|--------------------------------|-----|-----|-----|
| Launch Vehicle | G | G | G |
| Payload Fairing | G | G | G |
| First Stage | Y | Y | G |
| Second Stage | G | G | G |
| Third Stage | N/A | N/A | N/A |
| Payload Attach Fitting | G | G | G |
| Other | G | G | G |
| Mission Specific | G | G | G |
| Certification | N/A | N/A | N/A |
| Mission Analysis | G | G | G |
| ERS/ERB | G | G | G |
| Launch PAD/GSE | G | G | G |
| Mission Unique IV&V | N/A | N/A | N/A |

| REQUIREMENT VERIFICATION STATUS | |
|---------------------------------|-----|
| NUMBER OF REQUIREMENTS | 133 |
| VERIFIED TO DATE | 0 |

| LAUNCH PAD / GSE MODS (IF APPLICABLE) |
|---------------------------------------|
| EEB Cooling |

| MISSION UNIQUE STUDIES (IF APPLICABLE) |
|--|
| There are none. |

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NOAA-N' (Prime) - Mission ERB Status

Eric Poole

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|--------|-----------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| 0 | 06-046 | NOAA-N' ICD review | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 0 | 07-177 | NOAA-N Prime Dual Inhibits Waiver | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| G | 08-158 | SLC-2W EEB Temperature Control | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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NOAA-N' (Prime) - Vehicle ERB Status

Eric Poole

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|--------|---|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| 0 | 05-378 | RS-27 Engine-51 Hoop/Band Separation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| G | 07-308 | Delta II GG TLX Output Failure | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-074 | GPS IIR-19 2nd Stage Propellant Utilization Issue | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-136 | Tyco Relay Cracked Posts | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-137 | NTS Santa Clarita Pyroshock Undertest | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-157 | OSTM RS-27 LOX Dome Transducer - Flight Observation | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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NOAA-N' (Prime) - Launch Site

Tricia Fertig

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|-------------|-----|-----|-----|
| LSSP | G | G | G |

| LSSP | Planned | Released |
|-------------|-----------|----------|
| Preliminary | 12/1/2007 | 12/21/07 |
| Baseline | 7/1/2008 | |

| | Jul | Aug | Sep |
|------------------------|-----|-----|-----|
| CUSTOMER INPUTS | G | G | G |

| DELIVERABLES | Jul | Aug | Sep |
|-----------------------------|-----|-----|-----|
| Security and Badging | G | G | G |
| Training and Personnel Cert | G | G | G |
| Contingency Plans | G | G | G |
| Safety LSIM | G | G | G |
| Radiation Control | G | G | G |
| Operational Plans | G | G | G |

UNIQUE REQUIREMENTS

| | Jul | Aug | Sep |
|------------------------------|-----|-----|-----|
| LAUNCH SITE UNIQUE | G | G | G |
| GN2 Passive Cooling at SLC-2 | G | G | G |

| | | | |
|------------|---|---|---|
| PPF | G | G | G |
|------------|---|---|---|

| | | | |
|-----------------------|---|---|---|
| Spacecraft OPS | G | G | G |
|-----------------------|---|---|---|

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NOAA-N' (Prime) Budget Breakdown

Walner Thervil

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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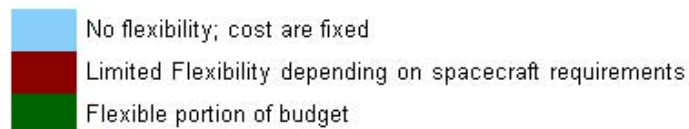
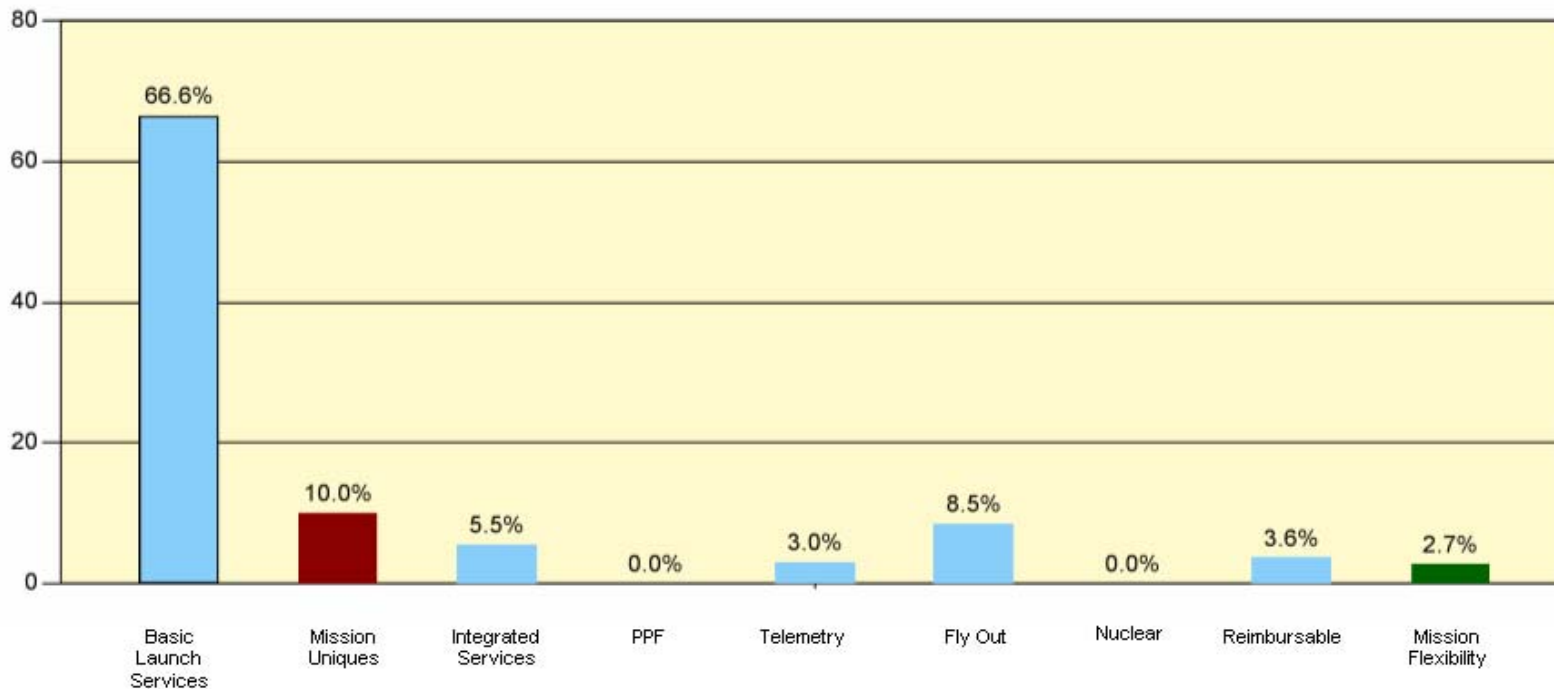
Launch Services Budget Breakdown

NOAA-N' (Prime) Mission

Walner Thervil

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 9 / 2008



Notes:

Variance: Mission flexibility is increased by 0.9% from the previous quarter due mainly to the reduction of the storage cost. Last quarter mission flexibility was 1.8%.

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NOAA-N' (Prime) - Business

Walner Thervil

LAUNCH SERVICES PROGRAM

Budget

Contracts

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| G | G | G |

| Milestone | Date |
|-------------|-----------|
| Milestone 1 | 6/30/2003 |
| Milestone 2 | 4/30/2004 |
| Milestone 3 | 5/1/2006 |
| Milestone 4 | 8/1/2005 |
| Milestone 5 | 11/1/2005 |
| Milestone 6 | 3/1/2006 |
| Milestone 7 | 7/1/2006 |
| Milestone 8 | 9/1/2008 |
| Milestone 9 | 2/4/2009 |

| | |
|--------------------------|------------------------|
| <input type="checkbox"/> | Open Milestone Payment |
| <input type="checkbox"/> | Paid Milestone |

| Contract Status | | |
|-----------------|--------|--|
| Launch Services | | |
| Contract Mod | Number | Description |
| | 72 | Mission ATP w/ NSS 27.1 Western Range Launch & MUS 9.1 One-time Multi Trajectory/Multi Azimuth Scope Reduction |
| | 80 | Customized payment schedule |
| | 258 | Request NSS 25.2.1 Monthly Storage and NSS 25.2.2 (CY08 and CY09) per Vehicle Charge. |
| | 157 | Add launch readiness date of October 31, 2006 and request storage prices |
| | 309 | NSS 35.2 Additional 40 Mission Console Notebooks for VAFB Launches |
| | 322 | Change NOAA-N' Mission Call Readiness Date (MCRD) from December 1, 2007 to July 1, 2008. |
| | 340 | Change NOAA-N' Mission Call Readiness Date (MCRD) from July 1, 2008 to September 1, 2008. |
| | 356 | NSS 25.2.1 and NSS 25.2.2 Recurring Call-up Charges |

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| | | | | |
|----------------------------------|---|---|-----------------|-------------------|
| Contract Mod (LD) | Number | Description | | |
| | 82 | Launch Delay from 06/03/2005 to 10/30/2005 | | |
| | 93 | Launch Delay from 10/30/2005 to 01/30/2006 | | |
| | 117 | Launch Delay from 01/30/2006 to NET 12/2007 | | |
| | 274 | Launch Delay from NET 12/2007 to 02/1/2009 | | |
| | 352 | Launch Delay from February 1, 2009 to Febraury 4, 2009 due to Range Constraints | | |
| Task Assignments | Number | Description | Completion Date | Invoice Paid Date |
| | ML-029 | Compat with Delta II Review - NOAA-N' | 1/02/1997 | 2/03/1997 |
| | NLSB-232 R3 | Access platform concept study | 4/30/2007 | 7/10/2007 |
| | NLSB-238 R1 | Explosion-proof telephone at SLC-2 | 11/15/2006 | 11/20/2006 |
| | NLSB-252 R2 | EEB Temperature Control Concept Study | 7/01/2007 | 1/08/2008 |
| | NLSB-267 | Vehicle Modification for Payload fairing Re-Radiation System | 1/01/2009 | 9/05/2008 |
| | NLSB-320 | SLC-2 Level 5 and Level 6 Access Platform Build and Install | 11/16/2008 | |
| | NLSB-324 | Payload Fairing Storage Support Equipment Capability | 7/31/2008 | 8/12/2008 |
| | NLSB-330 R1 | EEB Temperature Control Design Implementation | 12/30/2008 | |
| There are no PPF Contract Mods | | | | |
| There are no Other Contract Mods | | | | |
| | Issues | | | |
| G | Mission has 0 (zero) days of grace remaining with no additional pre-defined penalties up to MCRD. When the mission is out of storage, the Government is liable for Equitable Adjustment if Government delays occur. | | | |



John F. Kennedy Space
Center

NOAA-N' (Prime) - Safety and Mission Assurance

Ken Hale

LAUNCH SERVICES PROGRAM

| Assurance Verification Areas | Status | | Evidence of Completion | Jul | Aug | Sep |
|-------------------------------------|--------------------------|-------------------------------------|--|-----|-----|-----|
| | Complete | In Work | | | | |
| Quality | | | | 0 | Y | Y |
| Software / Hardware Problems | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Continuing to monitor ULA-Boeing's response to Quality Management System risk | 0 | Y | Y |
| Alerts | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | 0 | G | G |
| Audits/Inspections/Surveillances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. Will pursue DCMA coverage of Pueblo operations. | 0 | G | G |
| Limited Life Items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | 0 | G | G |
| Reliability | | | | 0 | G | G |
| FMEA | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | 0 | G | G |
| Reliability Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | S/C RF inhibit reliability review is complete. SMA agrees with the GSFC assessment. Negligible impact to the overall Launch Vehicle reliability. | 0 | G | G |
| Safety | | | | 0 | G | G |
| Requirements Definitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | S/C RF inhibit assessment is complete. Safety agrees with ICD waiver to dual RF inhibit requirement. | 0 | G | G |
| Range Safety & Mission Flight Rules | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked | 0 | G | G |
| Licenses/Use Authorizations | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked | 0 | G | G |
| Safety Documentation | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Spacecraft ARAR review complete. Will assessing operations to be performed in Pueblo. | 0 | G | G |
| Non-compliances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked | 0 | G | G |
| Contingency Planning | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked | 0 | G | G |
| Mission Assurance | | | | 0 | Y | Y |
| Lessons Learned | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | 0 | G | G |
| First Flight/Mission Unique items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | 0 | G | G |
| Test/Qualification/Certification | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | 0 | G | G |
| Mission Assurance Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Tracking Alenia tank issues | 0 | Y | Y |
| Risk Management | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Alenia tanks are yellow for Delta-II. Tank assigned to NOAA-N' will be evaluated along with any potential risk. Mission Assurance agrees with ICD waiver to dual RF inhibit requirement. | 0 | Y | Y |

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NOAA-N' (Prime) Comm & Telemetry

Ralph Mikulas and Mike Patton

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

| Jul | Aug | Sep |
|-----|-----|-----|
| G | 0 | G |
| G | 0 | G |
| G | 0 | G |
| G | 0 | G |
| G | 0 | G |
| G | 0 | G |
| G | 0 | G |
| G | 0 | G |

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

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NPP Project Summary

OVERALL MISSION

| Jul | Aug | Sep |
|-----|-----|-----|
| G | R | Y |

LAUNCH SERVICES PROGRAM



| | |
|----------------------|----------------|
| Mission | NPP |
| Launch Date | 2010/10/01 |
| Launch Vehicle | Delta II |
| Launch Period Window | Daily |
| PPF | Commercial PPF |

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

| Jul | Aug | Sep |
|-----|-----|-----|
| G | R | Y |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

| Jul | Aug | Sep |
|-----|-----|-----|
| Y | Y | Y |
| Y | Y | Y |
| Y | Y | Y |
| G | G | G |
| G | G | G |

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

| Jul | Aug | Sep |
|-----|-----|-----|
| Y | Y | Y |
| G | G | G |
| Y | Y | Y |
| G | G | G |

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

| | | |
|-----|-----|---|
| G | G | G |
| G | G | G |
| N/A | N/A | 0 |
| G | G | G |
| G | G | G |
| G | G | G |
| N/A | N/A | 0 |

COMM & TELEMETRY

Communications
Telemetry

| | | |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 0 | 0 |

BUSINESS

Budget
Contracts

| | | |
|---|---|---|
| Y | G | G |
| G | G | G |

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

| |
|-----|
| G |
| Y |
| R |
| 0 |
| N/A |

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

| | | |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

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NPP - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

| | | Condition |
|-----|--------|--|
| RYG | RiskID | Consequence |
| 0 | V0046 | ULA/Boeing does not perform an inspection for microscopic cracks (micro cracks) before providing a spacecraft customer with a Test Payload Attach Fitting (TPAF) or clampband. |
| | | Propagation of a micro crack(s) in the TPAF or clampband during shock or vibration testing could cause damage to the spacecraft. |
| 0 | V0050 | Dawn experienced a significant delay very late in the hardware production process that delayed the launch readiness date. The same contributing causes exist for other NASA missions. In addition, ULA just in time delivery approach provides little margin to hardware need dates. |
| | | Possible delay of critical path key milestones. |
| 0 | P0016 | Funding for repair/ replacement of some systems required to launch Delta II at SLC-2 has been disapproved by SOMD. |
| | | Failure of one of these systems may result in a launch delay. |
| 0 | P0023 | Less than 50% of Delta personnel are being relocated from HB to Denver, skill gaps, assignment changes and high workload exist during ULA transition timeframe (December 2006 to 2008). |
| | | NASA mission work and support may be delayed. |
| 0 | P0025 | Several GSE systems used for processing and launch of Delta II are aging and corroding as evidenced by several recent incidents/close calls (falling rust/debris, handrail failure, etc.). |
| | | Failure of a SLC-2W MST/FUT safety system could result in personnel injury/death. |

P
R
C
B

C
F

C
C
C
U
R
R
E
N
C
E

5
91-
100%
4
51-90%
3
11-50%
2
6-
10%
1
1-5%



1 2 3 4 5
IMPACT

September 18, 2008

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| | | |
|---|-------|--|
| 0 | V0047 | Failure analysis of a Pacific Scientific PN 107800-201 detonator (SN 4498) that failed service life extension testing uncovered a manufacturing process vulnerability in which detonators could be reworked and inadvertently returned to production without the correct load of explosive material. |
| | | Failure to initiate third stage ignition or FTS destruct ordnance chain on command. |
| 0 | V0052 | LS SMA has noted human error and process issues that indicate that Boeing's Quality Management System Corrective Actions are not preventing re-occurrence. |
| | | The re-occurrence of undetected human errors and process problems can lead to major damage or loss of flight hardware or GSE. |
| 0 | V0061 | Twelve out of 287 Tyco relays manufactured post-2002 have failed due to shorting. |
| | | Failure of a relay within the Delta II First Stage or Second Stage Power and Control (P&C) boxes could cause loss of redundancy. |
| 0 | V0057 | Condition: During Accelerated Age Testing (AAT) on September 28, 2007, a Gas Generator (GG) tipped Thin Layer Explosive (TLX) line from lot UCO07001-002 failed to produce an output. |
| | | Consequence: Failure of the GG TLX to produce an output will cause all six ground ignited GEM's to remain attached to the launch vehicle resulting in mission failure. |



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NPP - Significant Events

LAUNCH SERVICES PROGRAM

| Accomplished | |
|--|-----------------------|
| Early CLA | |
| Kick off meeting | |
| Fairing Door inputs | |
| S/C Mission Ops Review | 08/15/2005-08/17/2005 |
| Fairing Clearance analysis and Compatibility Drawing Review comple | |
| Received Draft IRD | 11/01/2007 |
| Draft Baseline ICD release | 07/18/2008 |

| Planned | |
|-----------------|--------------|
| Kickoff MIWG R1 | late October |

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NPP Mission Management

Bruce Reid

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

| |
|-------------------------|
| NPP |
| 2010/10/01 |
| 196 deg. flight azimuth |
| Delta II |
| Daily |
| Commercial PPF |
| 2206 kg |
| SLC-2 |

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

| Jul | Aug | Sep |
|-----|-----|-----|
| G | R | Y |
| G | R | Y |
| Y | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | R | Y |

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

| |
|----------------------|
| GSFC |
| EOS-NPOESS |
| Ken Schwer |
| T.Jones / S.Antoniak |
| Bruce Reid |
| Norman Beck, Jr. |
| Tricia Fertig |
| Benjamin Studenski |
| Ken Hale |
| Ralph Mikulas |
| Tuan Doan |



ICD

Jul Aug Sep

| | | |
|---|---|---|
| G | G | G |
|---|---|---|

There are no signed SCNs

There are no SCNs in Review

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

| | | |
|---|---|---|
| G | G | G |
| G | G | G |
| G | G | G |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

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NPP - Engineering

Norman Beck, Jr.

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|--------------------------------|-----|-----|-----|
| Launch Vehicle | G | G | G |
| Payload Fairing | Y | G | G |
| First Stage | G | G | G |
| Second Stage | G | G | G |
| Third Stage | N/A | N/A | 0 |
| Payload Attach Fitting | G | G | G |
| Other | N/A | N/A | 0 |
| Mission Specific | G | G | G |
| Certification | N/A | N/A | 0 |
| Mission Analysis | G | G | G |
| ERS/ERB | G | G | G |
| Launch PAD/GSE | G | G | G |
| Mission Unique IV&V | N/A | N/A | 0 |

| REQUIREMENT VERIFICATION STATUS | |
|---------------------------------|---|
| NUMBER OF REQUIREMENTS | 0 |
| VERIFIED TO DATE | 0 |

| LAUNCH PAD / GSE MODS (IF APPLICABLE) |
|---------------------------------------|
| There are none. |

| MISSION UNIQUE STUDIES (IF APPLICABLE) |
|--|
| There are none. |

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NPP - Mission ERB Status

Norman Beck, Jr.

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|-------|---------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| 0 | 04-17 | NPP MECO Assessment | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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NPP - Vehicle ERB Status

Norman Beck, Jr.

LAUNCH SERVICES PROGRAM

There are no Vehicle ERBs for this mission.

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NPP - Launch Site

Tricia Fertig

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|-------------|-----|-----|-----|
| LSSP | Y | Y | Y |

| LSSP | Planned | Released |
|-------------|-----------|----------|
| Preliminary | 2/2/2009 | |
| Baseline | 10/2/2009 | |

| | Jul | Aug | Sep |
|------------------------|-----|-----|-----|
| CUSTOMER INPUTS | Y | Y | Y |

DELIVERABLES

| | Jul | Aug | Sep |
|-----------------------------|-----|-----|-----|
| Security and Badging | 0 | 0 | 0 |
| Training and Personnel Cert | 0 | 0 | 0 |
| Contingency Plans | 0 | 0 | 0 |
| Safety LSIM | G | G | G |
| Radiation Control | 0 | 0 | 0 |
| Operational Plans | 0 | 0 | 0 |

UNIQUE REQUIREMENTS

| | Jul | Aug | Sep |
|---------------------------|-----|-----|-----|
| LAUNCH SITE UNIQUE | G | G | G |

| | | | |
|------------|---|---|---|
| PPF | Y | Y | Y |
|------------|---|---|---|

| | | | |
|-----------------------|---|---|---|
| Spacecraft OPS | G | G | G |
|-----------------------|---|---|---|

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NPP Budget Breakdown

Benjamin Studenski

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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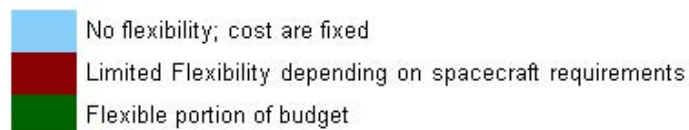
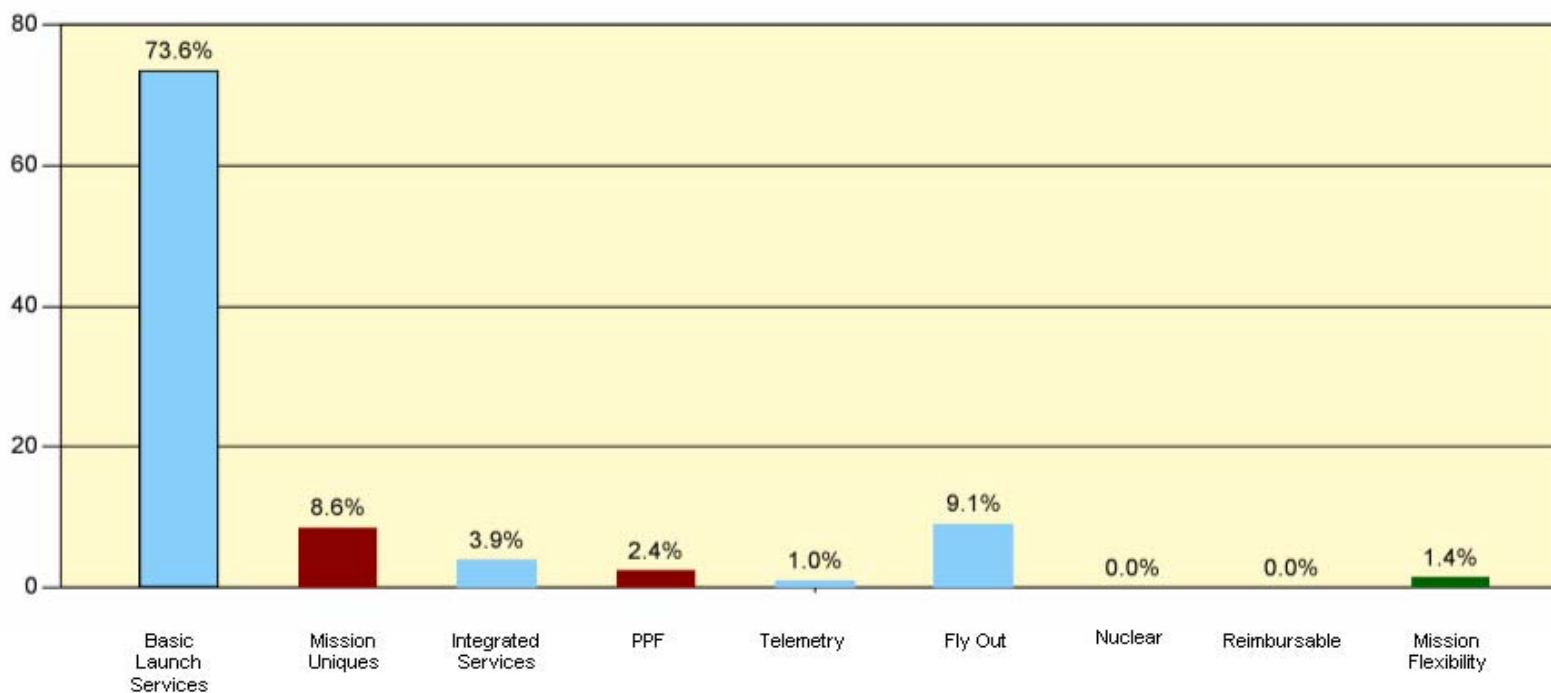
Launch Services Budget Breakdown

NPP Mission

Benjamin Studenski

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 9 / 2008



Notes:

September 18, 2008

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| |
|--|
| Note: |
| Variance: Open Equitable Adjustment claims for the delay to 4/30/2009, and for the delay to 9/1/2009. |
| Mission has 0 days of grace remaining and all future delays are subject to Equitable Adjustment claims by the contractor. |
| A launch delay is expected to move the launch date of NPP to after CY 2009. This launch date change would result in charges for Post Production support and Pad Maintenance. |
| Milestone payments will continue to be invoiced according to the schedule supporting a 9/1/2009 launch date until a contractual change to the launch date is directed. |



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NPP - Business

Benjamin Studenski

LAUNCH SERVICES PROGRAM

Budget

Contracts

| Jul | Aug | Sep |
|-----|-----|-----|
| Y | G | G |
| G | G | G |

| Milestone | Date |
|---------------|------------|
| Milestone 1 | 07/31/2004 |
| Milestone 2 | 10/31/2004 |
| Milestone 3 | 01/31/2005 |
| Milestone 4 | 04/30/2005 |
| Milestone 5 | 12/01/2005 |
| Milestone 6 | 09/01/2008 |
| Milestone 7 | 12/01/2008 |
| Milestone 8 | 03/01/2008 |
| Milestone 9 | 06/01/2009 |
| Milestone: 10 | 09/01/2009 |

| | |
|--------------------------|------------------------|
| <input type="checkbox"/> | Open Milestone Payment |
| <input type="checkbox"/> | Paid Milestone |

| Contract Status | | |
|-----------------|--------|--|
| Launch Services | | |
| Contract Mod | Number | Description |
| | 062 | NSS 20.3.3: Quick Turnaround Coupled Load Analysis |
| | 084 | NSS 9.1.1: Two 61 Pin Electric Interface from Fairing to Payload |
| | 162 | MU (1): Remove Re-Radiating System from Mission Uniques |
| | 141 | NSS 10.1: Remove camera NSS |
| | 129 | CLIN 14 NPP ATP |
| | 287 | NSS 35.2 Additional Console Notebooks |
| | 129 | NSS 11.2 Enhanced Fairing Cleaning |
| | 129 | NSS 10.1 Launch Vehicle Mounted Camera |
| | 129 | NSS 11.1 Enhanced Fairing Environment |

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| | | | | |
|--------------------------------|---|-------------------------------------|-----------------|-------------------|
| Contract Mod | Number | Description | | |
| | 129 | MU (1) Re-Radiating System | | |
| | 129 | Original ATP LAunch Date 10/31/2006 | | |
| Contract Mod (LD) | Number | Description | | |
| | 171 | Delay from 10/31/06 to NET 3/1/07 | | |
| | 206 | Delay from 3/1/07 to 4/30/09 | | |
| | 323 | Delay from 4/30/2009 to 9/1/2009 | | |
| Task Assignments | Number | Description | Completion Date | Invoice Paid Date |
| | NLSB-037R1 | CLA Time Histories | 10/31/2003 | 11/30/2003 |
| | NLSB-121 | TPAF Mods | 11/26/2004 | 12/02/2004 |
| There are no PPF Contract Mods | | | | |
| Contract Mod (Other) | Number | Description | | |
| | 057 | Flyout costs | | |
| | 085 | Flyout costs | | |
| | 125 | Flyout costs | | |
| | 198 | Flyout Costs | | |
| | Issues | | | |
| G | Equitable Adjustment amount being negotiated for launch delay to 9/1/2009 | | | |



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Center

NPP - Safety and Mission Assurance

Ken Hale

LAUNCH SERVICES PROGRAM

| Assurance Verification Areas | Status | | Evidence of Completion | Jul | Aug | Sep |
|-------------------------------------|--------------------------|-------------------------------------|---|-----|-----|-----|
| | Complete | In Work | | | | |
| Quality | | | | Y | Y | Y |
| Software / Hardware Problems | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Continuing to monitor ULA-Boeing's response to Quality Management System risk. | Y | Y | Y |
| Alerts | <input type="checkbox"/> | <input checked="" type="checkbox"/> | SMA is tracking no GIDEP issues at this time. | G | G | G |
| Audits/Inspections/Surveillances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | SMA Quality is continuing to selectively perform surveillances and audits. | G | G | G |
| Limited Life Items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| Reliability | | | | G | G | G |
| FMEA/Fishbones/Equivalent | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No FMEA/Fishbones/Equivalent have been identified. | G | 0 | G |
| Reliability Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | The reliability data gathering task is continuing. | G | 0 | G |
| Safety | | | | G | G | G |
| Requirements Definitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Requirements tailoring in progress. | G | G | G |
| Range Safety & Mission Flight Rules | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| Licenses/Use Authorizations | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| Safety Documentation | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| Non-compliances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| Contingency Planning | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| Mission Assurance | | | | Y | Y | Y |
| Lessons Learned | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| First Flight/Mission Unique items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| Test/Qualification/Certification | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| Mission Assurance Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | Y | G | G |
| Risk Management | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Alenia tanks are yellow for Delta II. NPP tank to be assessed along with any residual risk. | Y | Y | Y |

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NPP Comm & Telemetry

Ralph Mikulas and Tuan Doan

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |



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IBEX Project Summary

OVERALL MISSION

| Jul | Aug | Sep |
|-----|-----|-----|
| Y | G | G |

LAUNCH SERVICES PROGRAM



| | |
|----------------------|-----------------------------|
| Mission | IBEX |
| Launch Date | 2008/10/19 |
| Launch Vehicle | Pegasus |
| Launch Period Window | Determined by Arg. of Perig |
| PPF | 1555 |

MISSION MANAGEMENT

| | Jul | Aug | Sep |
|---------------------|-----|-----|-----|
| Observatory Status | Y | G | G |
| Manifest/Range | G | G | G |
| Integrated Schedule | Y | G | G |
| ICD | G | G | G |
| CDRLs (S/C & LSC) | Y | G | G |

LAUNCH SITE

| | Jul | Aug | Sep |
|--------------------|-----|-----|-----|
| LSSP | G | G | G |
| Customer Inputs | G | G | G |
| PPF | G | G | G |
| Launch Site Unique | G | G | G |
| Spacecraft OPS | G | G | Y |

SAFETY & MISSION ASSURANCE

| | Jul | Aug | Sep |
|-------------------|-----|-----|-----|
| Mission Assurance | Y | Y | Y |
| Safety | G | G | G |
| Quality | G | G | Y |
| Reliability | G | G | G |

ENGINEERING

| | | | |
|---------------------|-----|-----|-----|
| Launch Vehicle | G | G | G |
| Mission Specific | Y | G | G |
| Certification | N/A | N/A | N/A |
| Mission Analysis | Y | G | G |
| ERS/ERB | Y | G | G |
| Launch PAD/GSE | G | G | G |
| Mission Unique IV&V | G | G | G |

COMM & TELEMETRY

| | | | |
|----------------|---|---|---|
| Communications | G | G | G |
| Telemetry | G | G | G |

BUSINESS

| | | | |
|-----------|---|---|---|
| Budget | G | G | G |
| Contracts | G | G | G |

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

| |
|-----|
| G |
| Y |
| R |
| D |
| N/A |

DOWNRANGE TELEMETRY

| | | | |
|-----------------|-----|-----|---|
| Ground Stations | G | G | G |
| Deployables | N/A | N/A | D |
| P-3/OTTR | N/A | N/A | D |

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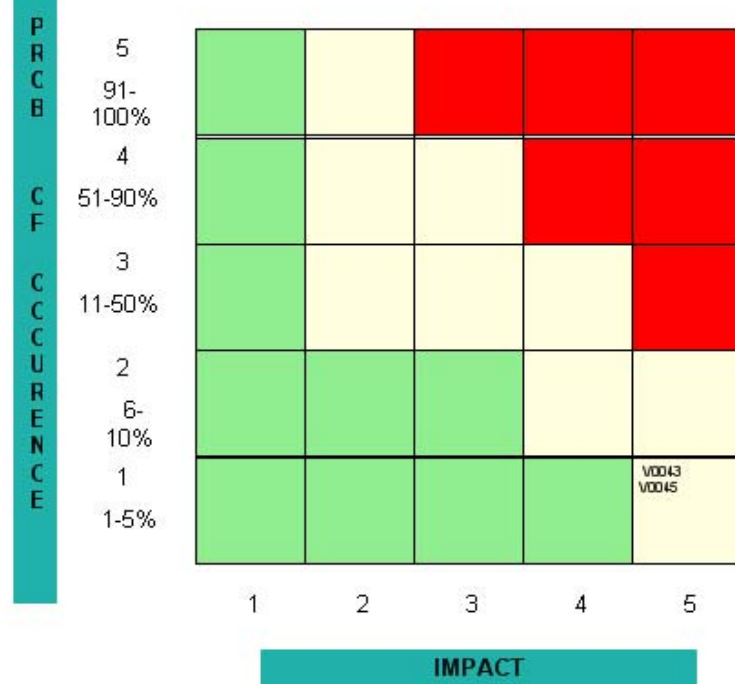


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IBEX - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

| | | Condition |
|--------------|--------|---|
| RYG Trend | RiskID | Consequence |
| N/A | V0043 | LS SMA has noted various deficiencies within Orbital Science Corporations Quality Management System |
| | | These quality management system deficiencies increase the likelihood that undetected technical problem(s) are present on the flight hardware. |
| N/A | V0045 | Delamination within Orion nozzle ECL on non-NASA vehicle |
| | | Adverse heating of structural components leading to nozzle failure |



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IBEX - Significant Events

LAUNCH SERVICES PROGRAM

| Accomplished | |
|---|-----------------------|
| IBEX MUPDR | 09/20/2006-09/20/2006 |
| IBEX CDR | 09/12/2006-08/18/2006 |
| MIWG#4/RWG#1 at Kwajalein | 10/20/2006-10/27/2006 |
| MUCDR | 03/20/2007-03/20/2007 |
| Mission Integration TIM | 12/6/2006-12/6/2007 |
| MIWG #5/RWG#2 at VAFB | 05/22/2007-05/23/2007 |
| Delta MUCDR | 08/29/2007-08/29/2007 |
| MLB Separation Test | 12/18/2007-02/01/2008 |
| GOWG at VAFB | 01/17/2008-01/18/2008 |
| Avionics shim test, study on test article avionics shelf/test on flight avionics unit | 01/21/2008-03/17/2008 |
| GOR at VAFB | 03/12/2008-03/12/2008 |
| IBEX Pre-Ship Review at Dulles; shipment on hold; delta pre ship not yet scheduled | 04/17/2008-04/18/2008 |
| Launch Operations Working Group (LOWG) at VAFB May 15 | 05/06/2008-05/15/2008 |
| Measurement of third stage motor flange flatness complete showing approximate 2 mils maximum. No shimming will be needed. | 05/01/2008-06/10/2008 |
| Transmissibility test with avionics shelf showing approximated 50 % transmissibility with fully loaded IBEX flight avionics shelf | 05/05/2008-06/02/2008 |
| FMA Inputs to support NET Oct 5 have been submitted to LSG with preliminary mass values for the S/C. | 05/16/2008-07/31/2008 |

| Planned | |
|---------------|-----------------------|
| IVT | 09/17/2008-09/19/2008 |
| Flight Sim #4 | 09/25/2008-09/27/2008 |

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| | |
|---|-----------------------|
| CLA inputs for shock and c ring designs have all been provided by S/C and run by LSG. Preliminary results for all configurations have been provided to S/C project | 04/28/2008-06/13/2008 |
| Validated CLA (estimated date). C-channel option eliminated; Shock ring not available for validation until July, however, S/C reporting environmental testing on Shock ring going well with no unexpected results. VLC run and results reviewed with no | 06/13/2008-09/12/2008 |
| Contracted lab to perform CTE testing on sample avionics shelf material. material shipped 6/12/08. Results expected end of July. | 06/12/2008-07/31/2008 |
| Avionics shelf flatness reconvene was held. Measurement on installed avionics shelf fwd flange taken and final flatness value at S/C interface at separation provided (4.25 mils). Action item on CTE confirmation still open. | 06/27/2008-07/31/2008 |
| Launch Vehicle Readiness Review (LVRR) | 08/25/2008-08/25/2008 |
| SC MRR | 09/03/2008 |



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IBEX Mission Management

John Calvert

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

| |
|----------------------------------|
| IBEX |
| 2008/10/19 |
| 200km target circular, 11 deg |
| Pegasus |
| Determined by Arg. of Perig |
| 1555 |
| 461.6 |
| Kwajalein |



ICD

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |

| SIGNED SCNS: | | SCNS IN REVIEW | |
|--------------------------|-------------|-------------------------|-------------|
| SCN # | DATE SIGNED | SCN # | DATE SIGNED |
| ICP-15/Radiated emission | 06/06/2008 | ICP-16: Fairing Venting | |
| ICP-17: bracket/cleanup | 06/06/2008 | EICD ICP 10, GSE update | |
| ICP 6 - 14 | 04/15/2008 | ICP 22 ASE update | |

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Jul Aug Sep

| | | |
|---|---|---|
| Y | G | G |
| Y | G | G |
| G | G | G |
| Y | G | G |
| Y | G | G |
| 0 | 0 | 0 |
| G | G | G |

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

| | | |
|-----|-----|---|
| Y | G | G |
| Y | G | G |
| G | G | G |
| G | G | G |
| N/A | N/A | 0 |
| N/A | N/A | 0 |

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

| |
|--------------------------------------|
| GSFC |
| Explorers |
| G. Frazier (GSFC) Scherrer (SwRI) |
| Mark Phillips |
| John Calvert |
| Sarah LeValley |
| Jeffrey Ehram |
| Ken Carr |
| Michael Johnson |
| Ralph Mikulas |
| Tuan Doan |

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| | | | |
|--|------------|---|--|
| MICD ICP 1-4 | 04/15/2008 | ICP 24 Thermal Humidity update | |
| EICD ICP 4-9 | 04/15/2008 | | |
| ICP 18 | 05/05/2008 | | |
| ICD-21: launch date/Sept 13 | 06/06/2008 | ICP 25 FMA Updates | |
| ICP-19: State Vector | 07/01/2008 | ICP 27, Interface flatness | |
| ICP-20: radiated emission waiver | 06/06/2008 | ICD 28, 29, 30, 31 | |
| ICP 23 Launch date Oct 5 | 06/30/2008 | EICD 11, 12, 13 | |
| | | MICD ICP 5 | |
| ICP 26 Contamination doc rev update | 07/09/2008 | | |



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IBEX - Engineering

Sarah LeValley

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|--------------------------------|-----|-----|-----|
| Launch Vehicle | G | G | G |
| Payload Fairing | G | G | G |
| First Stage | G | G | G |
| Second Stage | G | G | G |
| Third Stage | G | G | G |
| Payload Attach Fitting | N/A | N/A | N/A |
| Other | N/A | N/A | N/A |
| Mission Specific | Y | G | G |
| Certification | N/A | N/A | N/A |
| Mission Analysis | Y | G | G |
| ERS/ERB | Y | G | G |
| Launch PAD/GSE | G | G | G |
| Mission Unique IV&V | G | G | G |

| REQUIREMENT VERIFICATION STATUS | |
|---------------------------------|-----|
| NUMBER OF REQUIREMENTS | 142 |
| VERIFIED TO DATE | 19 |

| LAUNCH PAD / GSE MODS (IF APPLICABLE) |
|---------------------------------------|
| There are none. |

| MISSION UNIQUE STUDIES (IF APPLICABLE) |
|--|
| There are none. |

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IBEX - Mission ERB Status

Sarah LeValley

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|------------|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| G | 05-382 | IBEX ICD Review | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 06-368 | Pegasus/IBEX Mission Unique CDR | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-280 | Pegasus - IBEX S&A Fairing Door | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-236 | Pegasus IBEX Modified Avionics/Transient Li-Ion Battery System | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-202 | IBEX Avionics PDU Mission Unique Modification | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-69 | IBEX VLC, S/C Loads Exceedance | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-79 | IBEX Static Envelope Exceedance | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | ERS-07-279 | Peg/IBEX Conax Isolation Valve(First Flight) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-179 | Pegasus L1011 Mods - ECS upgrades | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| G | 08-181 | First Flight S2/3 BBQ Roll for IBEX | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-195 | Use of IBEX TDRS Data to Cover Spacecraft Separation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| G | 08-210 | Use of Peg Store and forward for IBEX mission | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-196 | IBEX Orbital Target Generation | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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IBEX - Vehicle ERB Status

Sarah LeValley

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|--------|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| G | 07-270 | Pegasus Fin-Pin Redesign | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-160 | Pegasus - NTS Santa Clarita Pyroshock Undertest | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-198 | ST2005 Telemetry Transmitter loss of output power | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-197 | Common Hardware flight anomaly assessment | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-103 | Peg-CNOFS Post Flight Data Review | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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IBEX - Launch Site

Jeffrey Ehram

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|-------------|-----|-----|-----|
| LSSP | G | G | G |

| LSSP | Planned | Released |
|-------------|------------|------------|
| Preliminary | 02/19/2007 | 06/15/07 |
| Baseline | 11/19/2007 | 01/02/2008 |

| | Jul | Aug | Sep |
|------------------------|-----|-----|-----|
| CUSTOMER INPUTS | G | G | G |

| | Jul | Aug | Sep |
|-----------------------------|-----|-----|-----|
| DELIVERABLES | | | |
| Security and Badging | G | G | G |
| Training and Personnel Cert | G | G | G |
| Contingency Plans | G | G | G |
| Safety LSIM | G | G | G |
| Radiation Control | G | G | G |
| Operational Plans | G | G | G |

UNIQUE REQUIREMENTS

LAUNCH SITE UNIQUE

Spin table not available at VAFB; Orbital to provide table from Dulles, VA

Contingency hydrazine support at RTS

Range Safety approval for spin balance has been given verbally with caveats on documentation of safety features and analysis that were agreed to at SWG.

PPF

PPF extension may be required if schedule continues to slip. Possible facility conflict in November due to COSMO and OCO.

IBEX Principle Investigator requests a low cost PPF; considers commercial PPF cost excessive for SMEX mission; On 29 Nov 2006, IBEX delivered a formal concurrence to use a commercial PPF.

Jul Aug Sep

| | | |
|---|---|---|
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |

| | | |
|---|---|---|
| G | G | G |
| O | O | Y |
| G | G | G |

Spacecraft OPS

| | | |
|---|---|---|
| G | G | Y |
|---|---|---|

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Procedure revisions, releases, reviews, and approvals have been "just in time" and will likely continue to be.

Motorized Light Band (MLB)
Connector Issue: A short to a backshell was investigated. Some of the connectors do not have the required Delrin insert inside the backshell which prevents sharp angles in the backshell from cutting into the wires. All removable harnesses have been sent to Dulles for X-ray and new harnesses are being built. The harnesses that remain on the S/C will be X-rayed in place if possible.

| | | |
|---|---|---|
| 0 | Y | Y |
| 0 | 0 | Y |



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IBEX Budget Breakdown

Ken Carr

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.
-
-

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

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^a **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.



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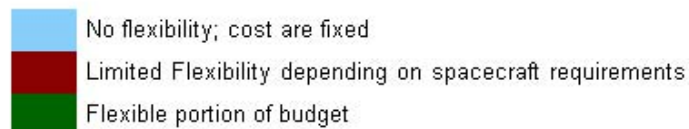
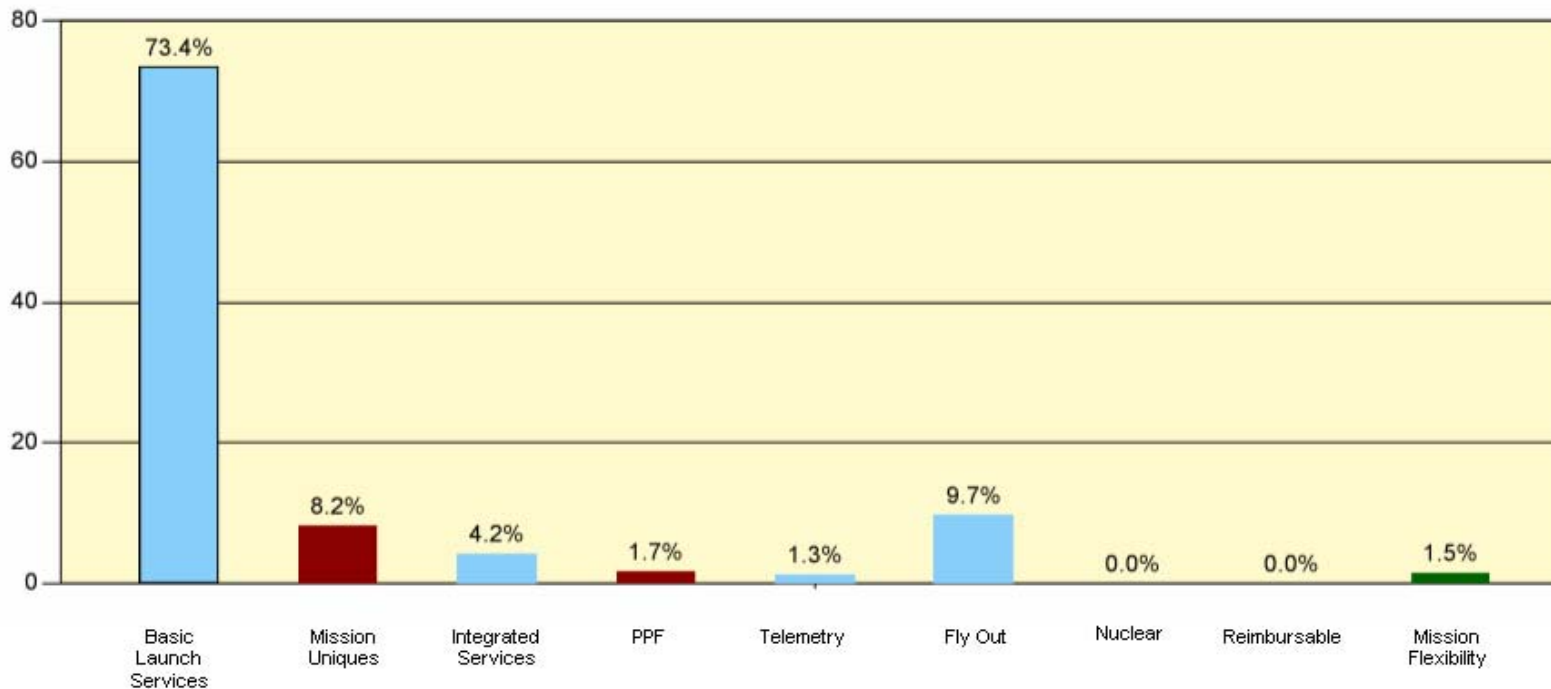
Launch Services Budget Breakdown

IBEX Mission

Ken Carr

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 9 / 2008



Notes:

Variance: PPF on contract reflects lower contract cost than original estimate which increased Mission Flexibility.

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IBEX - Business

Ken Carr

LAUNCH SERVICES PROGRAM

Budget

Contracts

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| G | G | G |

| Milestone | Date |
|--------------|----------|
| Milestone 1A | 11/1/03 |
| Milestone 1B | 9/1/04 |
| Milestone 1C | 11/1/04 |
| Milestone 1D | 1/1/05 |
| Milestone 2A | 9/15/05 |
| Milestone 2B | 12/15/05 |
| Milestone 3 | 8/15/06 |
| Milestone 4 | 3/15/07 |
| Milestone 5 | 7/15/07 |
| Milestone 6 | 1/15/08 |
| Milestone 7 | 3/15/08 |
| Milestone 8 | 9/5/08 |
| Milestone 9 | 12/5/08 |

| | |
|--------------------------|------------------------|
| <input type="checkbox"/> | Open Milestone Payment |
| <input type="checkbox"/> | Paid Milestone |

Contract Status

| Launch Services | | |
|-----------------|--------|---|
| Contract Mod | Number | Description |
| | Mod 11 | Launch Delay from 8/15/07 to 6/15/08 |
| | Mod 13 | KWAJ launch site option |
| | Mod 13 | Multiple Non-standard services |
| | Mod 25 | Mission Unique Performance enhancements |
| | Mod 26 | S&A upgrade |
| | Mod 27 | 2.2 Hydrocarbon Monitoring |

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| | | | | |
|-------------------------------|------------|---|-----------------|-------------------|
| Contract Mod | Number | Description | | |
| | Mod 31 | IBEX Launch Delay from 6/15/08 to 7/15/08 | | |
| | Mod 33 | Avionics Section Flatness mod Forward end | | |
| | Mod 34 | Avionics Section Flatness Mod Aft end | | |
| There are no LD Contract Mods | | | | |
| Task Assignments | Number | Description | Completion Date | Invoice Paid Date |
| | SP-23.001 | Coupled Loads Analysis | | |
| | SP-23.002 | Separation Analysis | | |
| | SP-23.003 | Vehicle Enhancement Study | | |
| | SP-23.004 | Separation Analysis | | |
| | SP-23.005 | Trajectory & Controls Analysis | | |
| | SP-23.006 | Soft-Ride Feasibility Study | | |
| | SP-23.007 | Early System Safety Support | | |
| | SP-23.008 | RF Compatibility Analysis | | |
| | SP-23.009 | IBEX CDR support | | |
| | SP-23.011 | IBEX Performance Study - Low Altitude Target | | |
| | SP-23.012 | Battery Health Check | | |
| | SP-23.013 | PDU Testing | | |
| | SP-23.014 | ST 2005 Transmitter study | | |
| | SP-23.015 | RCS Venting | | |
| | SP-23.016 | Mass Dispersion Study | | |
| | SP-23.017 | Avionics Shelf Flatness Study | | |
| | SP-23.018 | PMA | | |
| | SP-23.019 | Propellant Offload Support | | |
| | SP-23.020 | Payload Faring Venting Analysis | | |
| | SP-23.021 | Stage 3 Flatness Measurement | | |
| Contract Mod (PPF) | Number | Description | | |
| | NNK07LA79B | West Coast Commercial Payload Processing for IBEX Mission | | |

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| |
|----------------------------------|
| There are no Other Contract Mods |
| There are no Issues. |



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IBEX - Safety and Mission Assurance

Michael Johnson

LAUNCH SERVICES PROGRAM

| Assurance Verification Areas | Status | | Evidence of Completion | Jul | Aug | Sep |
|-------------------------------------|--------------------------|-------------------------------------|--|-----|-----|-----|
| | Complete | In Work | | | | |
| Quality | | | | G | G | Y |
| Software / Hardware Problems | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Continuing to monitor Orbital's response to Quality Management System risk | G | G | G |
| Alerts | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Tracking 2 GIDEP Alerts at this time | G | G | Y |
| Audits/Inspections/Surveillances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues at this time | G | G | G |
| Limited Life Items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Tracking no LLI issues at this time | G | G | G |
| Reliability | | | | G | G | G |
| FMEA | <input type="checkbox"/> | <input checked="" type="checkbox"/> | MU/FF items under review No FMEA/Fishbones/Equivalent have been identified | G | G | G |
| Reliability Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |
| Safety | | | | G | G | G |
| Requirements Definitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues at this time | G | G | G |
| Range Safety & Mission Flight Rules | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Received and in review | G | G | G |
| Licenses/Use Authorizations | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues at this time | G | G | G |
| Safety Documentation | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Appendix G Pegasus ARAR and Pegasus Ferry Checklist VAFB to Kwajalein (RTS) SWP-211 Rev in review. | G | G | G |
| Non-compliances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Waivers/Deviations/Exceptions | G | G | G |
| Contingency Planning | <input type="checkbox"/> | <input checked="" type="checkbox"/> | In work - coordinating with S/C | G | G | G |
| Mission Assurance | | | | Y | Y | Y |
| Lessons Learned | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues at this time. | G | G | G |
| First Flight/Mission Unique items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues at this time | G | G | G |
| Test/Qualification/Certification | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues at this time | G | G | G |
| Mission Assurance Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Following the NTS Pyroshock issue. | Y | Y | Y |
| Risk Management | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Risk identification and surveillance sufficient for project at this time | G | G | G |

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IBEX Comm & Telemetry

Ralph Mikulas and Tuan Doan

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Checkout
Console Configuration

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

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LRO-LCROSS / LCROSS Project Summary

OVERALL MISSION

| Jul | Aug | Sep |
|-----|-----|-----|
| Y | Y | 0 |

LAUNCH SERVICES PROGRAM



| | |
|----------------------|---------------------|
| Mission | LRO-LCROSS / LCROSS |
| Launch Date | 2009/03/02 |
| Launch Vehicle | Atlas V |
| Launch Period Window | 0 |
| PPF | ASO-KSC |

MISSION MANAGEMENT

| | Jul | Aug | Sep |
|---------------------|-----|-----|-----|
| Observatory Status | Y | G | 0 |
| Manifest/Range | Y | G | 0 |
| Integrated Schedule | Y | G | 0 |
| ICD | G | G | 0 |
| CDRLs (S/C & LSC) | G | G | 0 |

LAUNCH SITE

| | Jul | Aug | Sep |
|--------------------|-----|-----|-----|
| LSSP | G | G | 0 |
| Customer Inputs | G | G | 0 |
| PPF | Y | G | 0 |
| Launch Site Unique | G | G | 0 |
| Spacecraft OPS | 0 | 0 | 0 |

SAFETY & MISSION ASSURANCE

| | Jul | Aug | Sep |
|-------------------|-----|-----|-----|
| Mission Assurance | Y | Y | Y |
| Safety | G | Y | G |
| Quality | G | G | G |
| Reliability | G | G | G |

ENGINEERING

| | Jul | Aug | Sep |
|---------------------|-----|-----|-----|
| Launch Vehicle | Y | Y | 0 |
| Mission Specific | Y | Y | 0 |
| Certification | N/A | N/A | 0 |
| Mission Analysis | Y | R | 0 |
| ERS/ERB | Y | Y | 0 |
| Launch PAD/GSE | G | G | 0 |
| Mission Unique IV&V | Y | G | 0 |

COMM & TELEMETRY

| | Jul | Aug | Sep |
|----------------|-----|-----|-----|
| Communications | G | G | G |
| Telemetry | 0 | 0 | 0 |

BUSINESS

| | Jul | Aug | Sep |
|-----------|-----|-----|-----|
| Budget | G | G | G |
| Contracts | G | G | G |

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

| |
|-----|
| G |
| Y |
| R |
| 0 |
| N/A |

DOWNRANGE TELEMETRY

| | Jul | Aug | Sep |
|-----------------|-----|-----|-----|
| Ground Stations | G | G | 0 |
| Deployables | Y | Y | 0 |
| P-3/OTTR | 0 | 0 | 0 |

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LCROSS Project Summary

OVERALL MISSION

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | 0 |

LAUNCH SERVICES PROGRAM



| | |
|----------------------|------------|
| Mission | LCROSS |
| Launch Date | 2009/03/02 |
| Launch Vehicle | Atlas V |
| Launch Period Window | 0 |
| PPF | ASO-KSC |

MISSION MANAGEMENT

| | Jul | Aug | Sep |
|---------------------|-----|-----|-----|
| Observatory Status | G | G | 0 |
| Manifest/Range | G | G | 0 |
| Integrated Schedule | G | Y | 0 |
| ICD | G | G | 0 |
| CDRLs (S/C & LSC) | G | G | 0 |

LAUNCH SITE

| | Jul | Aug | Sep |
|--------------------|-----|-----|-----|
| LSSP | G | G | 0 |
| Customer Inputs | G | G | 0 |
| PPF | G | G | 0 |
| Launch Site Unique | G | G | 0 |
| Spacecraft OPS | 0 | 0 | 0 |

SAFETY & MISSION ASSURANCE

| | Jul | Aug | Sep |
|-------------------|-----|-----|-----|
| Mission Assurance | 0 | 0 | 0 |
| Safety | 0 | 0 | 0 |
| Quality | 0 | 0 | 0 |
| Reliability | 0 | 0 | 0 |

ENGINEERING

| | | | |
|---------------------|---|---|---|
| Launch Vehicle | 0 | 0 | 0 |
| Mission Specific | 0 | 0 | 0 |
| Certification | 0 | 0 | 0 |
| Mission Analysis | 0 | 0 | 0 |
| ERS/ERB | 0 | 0 | 0 |
| Launch PAD/GSE | 0 | 0 | 0 |
| Mission Unique IV&V | 0 | 0 | 0 |

COMM & TELEMETRY

| | | | |
|----------------|---|---|---|
| Communications | G | G | G |
| Telemetry | 0 | 0 | 0 |

BUSINESS

| | | | |
|-----------|---|---|---|
| Budget | G | G | G |
| Contracts | G | G | G |

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

| |
|-----|
| G |
| Y |
| R |
| 0 |
| N/A |

DOWNRANGE TELEMETRY

| | | | |
|-----------------|---|---|---|
| Ground Stations | G | G | 0 |
| Deployables | 0 | 0 | 0 |
| P-3/OTTR | 0 | 0 | 0 |

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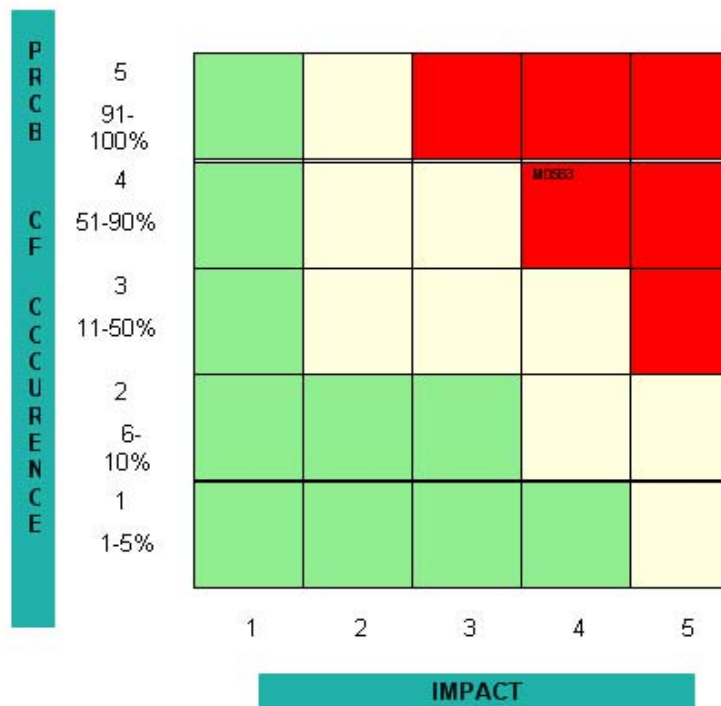


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LRO-LCROSS / LCROSS - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

| | | Condition |
|--------------|--------|--|
| RYG Trend | RiskID | Consequence |
| 0 | M0583 | Additional work required to support GSFC required LRO-LCROSS Mission Assurance COLA analysis places excessive workload on launch services contractor |
| | | Launch date slip due to inability to complete both baseline mission analysis and mission unique Mission Assurance COLA in a timely manner. |



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LRO-LCROSS / LCROSS - Significant Events

LAUNCH SERVICES PROGRAM

| Accomplished | |
|--|-----------------------|
| ATP Launch Services | 8/17/2006 |
| LRO Mission CDR | 11/6/2006-11/9/2006 |
| LCROSS Mission PDR | 9/6/2006-9/8/2006 |
| LCROSS Mission CDR | 2/21-23/2007 |
| LRO/LCROSS Requirements TIM | 8/24/2006 |
| LRO/LCROSS Kick-off MIWG | 9/25/06-9/26/06 |
| GOWG #1 | 11/28/2006-11/30/2006 |
| LCROSS Confirmation Review | 1/19/2007 |
| LRO/LCROSS MURR | 02/28/2007-02/28/2007 |
| LV Mission Unique Requirements Review (MURR) complete | 2/28/07-2/28/07 |
| MIWG3/GOWG2/LV Mission Briefing to Range Safety | 4/10/07-4/12/07 |
| Early confidence testing of LRO TM, LCROSS discrete SIL, elec connectors pull test. | 4/17/07-5/25/07 |
| First round of CPWSR data released | 5/25/07-6/21/07 |
| MIWG 4 - Denver (ICD Release, and Avionics Splinter, EICD and MICD Review) | 8/7/07-8/9/07 |
| Received summary of white paper from LCROSS clarifying risk acceptance/tolerance (Class D.) Final White Paper received July 13, 2007. | 6/22/07-7/15/07 |
| Long duration Centaur contamination sources and residuals analysis. (White paint, abrasion overwrap, foam outgassing, resid H2O, & resid. propellants.) Results in 12/17/07 Memo - presentation at March MIWG. | 4/01/07-12/31/07 |
| MUPDR | 11/06/07-11/07/07 |

| Planned | |
|----------------------------|-----------------------|
| LV Systems Review @ Denver | 11/5/08-11/5/08 |
| MIWG @ KSC | 09/16/2008-09/16/2008 |
| GOWG | 9/17/08-9/17/08 |
| GOR | 11/12/08-11/12/08 |

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| | |
|--|-----------------------|
| MUCDR\MPDR | 06/24/2008-06/25/2008 |
| LCROSS Electrical Connector Development test. | 6/25/07-9/30/07 |
| GOWG 3 - KSC | 1/9/08 -1/10/08 |
| Preliminary Release of LRO & LCROSS LSSPs. | 10/30/07-11/30/07 |
| ICD Baseline release (4 parties -Atlas, LSP, LRO, & LCROSS) | 9/14/07-1/04/08 |
| Preliminary CPWSR Data deliveries. | 6/21/07-7/18/07 |
| Final Loads Cycle Report Complete/Documented. | 8/7/07-9/18/07 |
| Commercial PPF contract (CLIN) in place for LRO and LCROSS processing. | 10/30/07-05/30/2008 |
| MIWG #5 (GSFC) | 12/11/2007-12/12/2007 |
| LRO clamp-band test mate @ GSFC | 07/19/2008-07/22/2008 |
| LCROSS Matchmate @ NGST | 4/15/08-4/17/08 |
| MUPDR- Reconvene (To close items from MUPDR) | 02/20/2008-02/20/2008 |
| MIWG #6 (NGST - Redondo Beach) | 03/17/2008-03/18/2008 |
| Atlas Test Like You Fly (TLYF) Review | 05/07/08-05/08/08 |
| GOWG #4 (New Date) May 20 (May 21 SLC-41 familiarization) | 5/20/08-5/21/08 |
| LRO flight hardware match mate @ GSFC. (Verification) | 8/01/08-8/04/08 |



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LRO-LCROSS / LCROSS Mission Management

Charles Tatro

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

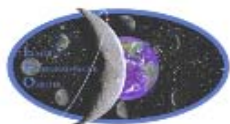
Launch Period Window

PPF

Mass (kg)

PAD

| |
|------------------------|
| LRO-LCROSS / LCROSS |
| 2009/03/02 |
| Lunar Trajectory |
| Atlas V |
| 0 |
| ASO-KSC |
| 2000 (LRO) |
| SLC 41 |



ICD

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | 0 |

There are no signed
SCNs

There are no SCNs in
Review

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Jul Aug Sep

| | | |
|---|---|---|
| Y | G | 0 |
| Y | Y | 0 |
| G | G | G |
| G | G | 0 |
| Y | Y | 0 |
| G | G | 0 |
| G | G | 0 |

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

| | | |
|---|---|---|
| Y | G | 0 |
| G | G | 0 |
| Y | G | 0 |
| G | G | 0 |
| Y | Y | 0 |
| 0 | 0 | 0 |

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

| |
|------------------------------------|
| Other |
| LPRP, S/C Projects @ GSFC & ARC |
| Craig Tooley/ Cathy Peddie |
| Tom Ajluni/Tom Jones |
| Charles Tatro |
| Diana Calero |
| Mark Shugg |
| Harold Coleman |
| Craig Schreiber |
| Mike Patton |
| Mike Patton |

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LCROSS Mission Management

Charles Tatro

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

| |
|------------|
| LCROSS |
| 2009/03/02 |
| LGALRO |
| Atlas V |
| 0 |
| ASO-KSC |
| <100 |
| SLC 41 |

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | Y | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

| |
|------------------|
| AMES |
| LPRP/ESMD |
| Dan Andrews |
| Tom Luzod |
| Charles Tatro |
| Norman Beck, Jr. |
| William Van Dyke |
| Harold Coleman |
| Craig Schreiber |
| Mike Patton |
| Mike Patton |



ICD

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | 0 |

There are no signed SCNs

There are no SCNs in Review

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

| | | |
|---|---|---|
| 0 | Y | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

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LRO-LCROSS / LCROSS - Engineering

Diana Calero

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LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|--------------------------------|-----|-----|-----|
| Launch Vehicle | Y | Y | 0 |
| Payload Fairing | G | G | 0 |
| First Stage | G | Y | 0 |
| Second Stage | G | Y | 0 |
| Third Stage | N/A | N/A | 0 |
| Payload Attach Fitting | G | G | 0 |
| Other | G | G | 0 |
| Mission Specific | Y | Y | 0 |
| Certification | N/A | N/A | 0 |
| Mission Analysis | Y | R | 0 |
| ERS/ERB | Y | Y | 0 |
| Launch PAD/GSE | G | G | 0 |
| Mission Unique IV&V | Y | G | 0 |

| REQUIREMENT VERIFICATION STATUS | |
|---------------------------------|-----|
| NUMBER OF REQUIREMENTS | 178 |
| VERIFIED TO DATE | 1 |

| LAUNCH PAD / GSE MODS (IF APPLICABLE) |
|---------------------------------------|
| LRO Clean Enclosure GSE |

| MISSION UNIQUE STUDIES (IF APPLICABLE) |
|---|
| Modal sensitivity analysis due to LCROSS SC modal uncertainty |

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LRO-LCROSS / LCROSS - Mission ERB Status

Diana Calero

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|------------|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| 0 | ERS 06-398 | LRO/LCROSS MUPDR | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS 06-399 | LRO/LCROSS MUCDR | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS 06-400 | LRO/LCROSS MPDR | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | 07-136 | LCROSS Separation System Thermal. Sep System Test in work | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS-07-306 | 7-pin DBAS connector qual test in work | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS-07-354 | Spacecraft IFD zinc and cad parts | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS 06-182 | LCROSS first NASA use off 1666 payload sep system. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS 06-374 | A5, IFD 61-pin connector in test planning for qualification | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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LRO-LCROSS / LCROSS - Vehicle ERB Status

Diana Calero

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|------------------------|---|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| 0 | ERS-05-196 | Atlas V - Thermal Assessment and Redesign of Single Pneumatics Panel [long coast] | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS-05-345 | Centaur Large Helium Bottle (LHB) COPV. First Flight Item for NASA. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS-03-609 /ERS-06-305 | Atlas V - Booster RP Tank / Atlas V RP Tank Long Term (Qual) Redesign.(Qual. supposedly completed April 2008) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS-06-21 | AV-010 Post Flight Data Review - Booster Exceedance - see also ERB-06-81) (First Article) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | 07-204 | Centaur performance degradation for NRO mission - AV009 Fuel Inlet Valve Anomaly. (for OIV see ERB-08-10, | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | 06-081 | Atlas-V Data Investigation, AV-010-009 mesurement booster pod exceedance | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 | ERS-08-183 | AV017 RD180 engine Mixture Ratio valve froze in position | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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LRO-LCROSS / LCROSS - Launch Site

Mark Shugg

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|-------------|-----|-----|-----|
| LSSP | G | G | 0 |

| LSSP | Planned | Released |
|-------------|------------|------------|
| Preliminary | 9/30/2007 | 10/25/07 |
| Baseline | 04/18/2008 | 06/30/2008 |

| | Jul | Aug | Sep |
|------------------------|-----|-----|-----|
| CUSTOMER INPUTS | G | G | 0 |

| DELIVERABLES | Jul | Aug | Sep |
|-----------------------------|-----|-----|-----|
| Security and Badging | G | G | 0 |
| Training and Personnel Cert | G | G | 0 |
| Contingency Plans | G | G | 0 |
| Safety LSIM | G | G | 0 |
| Radiation Control | 0 | 0 | 0 |
| Operational Plans | G | G | 0 |

UNIQUE REQUIREMENTS

| | Jul | Aug | Sep |
|---------------------------|-----|-----|-----|
| LAUNCH SITE UNIQUE | G | G | 0 |
| KSC Fueling Service | Y | Y | 0 |

| | Jul | Aug | Sep |
|-------------------------|-----|-----|-----|
| PPF | Y | G | 0 |
| Commercial PPF Contract | G | G | 0 |

| Spacecraft OPS | Jul | Aug | Sep |
|----------------|-----|-----|-----|
| | 0 | 0 | 0 |

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LCROSS - Launch Site

William Van Dyke

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|-------------|-----|-----|-----|
| LSSP | G | G | 0 |

| LSSP | Planned | Released |
|-------------|------------|-----------|
| Preliminary | 09/30/2007 | 11/2/2007 |
| Baseline | 06/13/2008 | 06/13/08 |

| | Jul | Aug | Sep |
|------------------------|-----|-----|-----|
| CUSTOMER INPUTS | G | G | 0 |

| DELIVERABLES | Jul | Aug | Sep |
|-----------------------------|-----|-----|-----|
| Security and Badging | G | G | 0 |
| Training and Personnel Cert | G | G | 0 |
| Contingency Plans | G | G | 0 |
| Safety LSIM | G | G | 0 |
| Radiation Control | 0 | 0 | 0 |
| Operational Plans | G | G | 0 |

UNIQUE REQUIREMENTS

| | Jul | Aug | Sep |
|------------------------------|-----|-----|-----|
| LAUNCH SITE UNIQUE | G | G | 0 |
| KSC Provided Fueling Service | G | G | 0 |

| | Jul | Aug | Sep |
|-------------------------|-----|-----|-----|
| PPF | G | G | 0 |
| Commercial PPF Contract | G | G | 0 |

| Spacecraft OPS | Jul | Aug | Sep |
|----------------|-----|-----|-----|
| | 0 | 0 | 0 |

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LRO-LCROSS / LCROSS Budget Breakdown

Harold Coleman

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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LCROSS Budget Breakdown

Harold Coleman

LAUNCH SERVICES PROGRAM

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- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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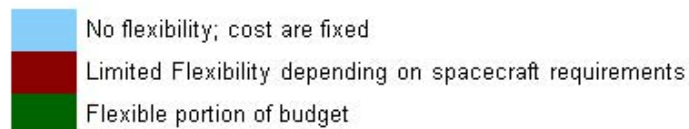
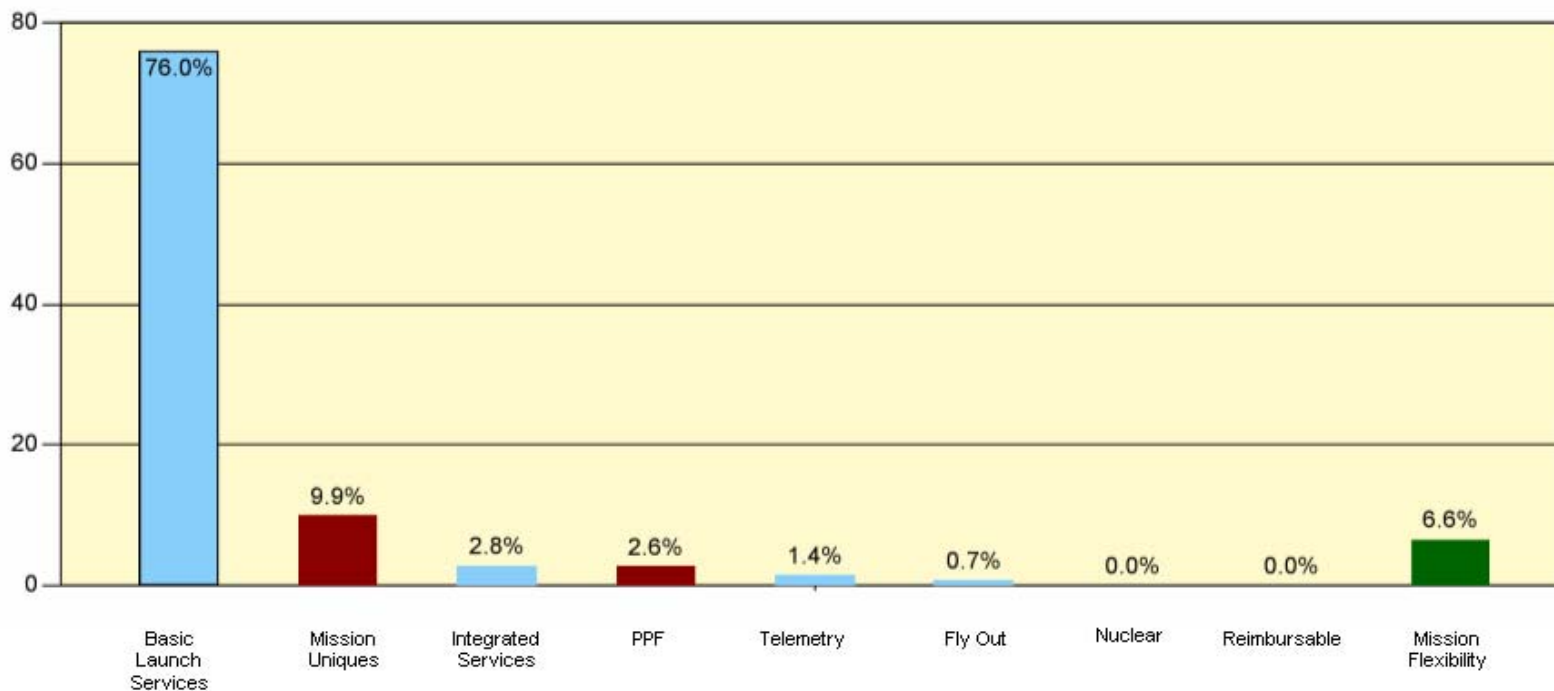
Launch Services Budget Breakdown

LRO-LCROSS / LCROSS Mission

Harold Coleman

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 9 / 2008



Notes:

Percentages reflect LRO project only. LCROSS reported separately. Variance from October reporting. Mission Flexibility changed from 8.2% to 7.8% due to a of a \$3.2M task order for Contamination Control Ground Support Equipment (GSE).

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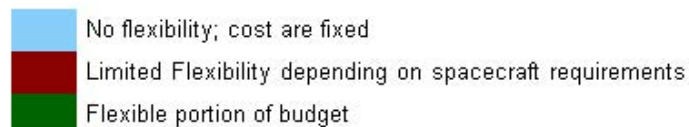
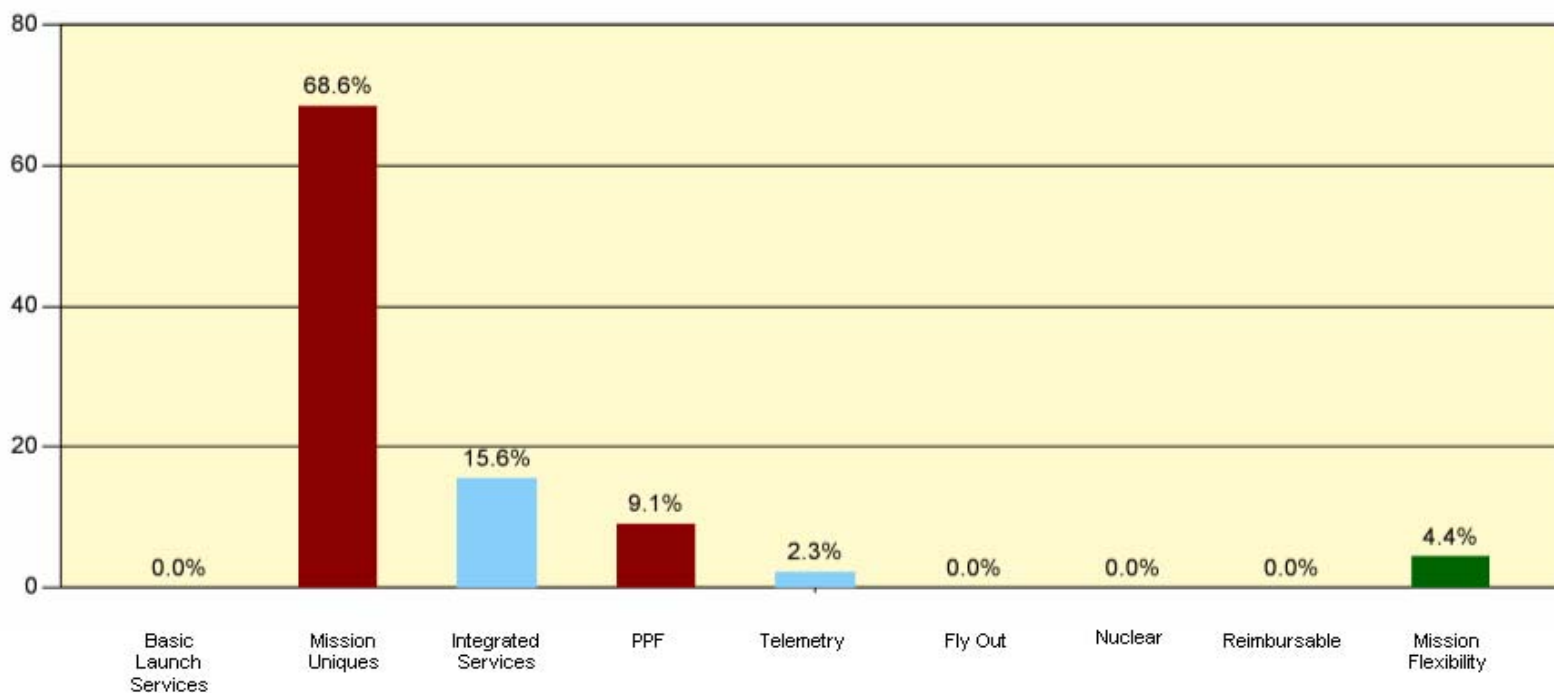
Launch Services Budget Breakdown

LCROSS Mission

Harold Coleman

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 9 / 2008



Notes:

Percentages reflect LCROSS project only. LRO reported separately. Variance from April reporting results from a slight increase in Mission Uniques liens to cover projected outreach activities. Mission flexibility changed from -12.4% to 4.4% due to a -\$2.6M decrease in scope for the Long Duration Centaur.

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LRO-LCROSS / LCROSS - Business

Harold Coleman

LAUNCH SERVICES PROGRAM

Budget

Contracts

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| G | G | G |

| Milestone | Date |
|---------------|------------|
| Milestone #1 | 8/17/06 |
| Milestone #2 | 1/31/07 |
| Milestone #3 | 4/20/07 |
| Milestone #4 | 05/16/2007 |
| Milestone #5 | 9/4/07 |
| Milestone #6 | 12/20/07 |
| Milestone #7 | 02/26/2008 |
| Milestone #8 | 04/30/2008 |
| Milestone #9 | 7/31/08 |
| Milestone #10 | 2/27/09 |

| | |
|--------------------------|------------------------|
| <input type="checkbox"/> | Open Milestone Payment |
| <input type="checkbox"/> | Paid Milestone |

| Contract Status | | |
|-----------------|----------|--|
| Launch Services | | |
| Contract Mod | Number | Description |
| | NLSB-226 | Renamed CLIN 23 "TBD" from "LRO" |
| | NLSL-086 | ATP Standard Service CLIN 8 |
| | NLSL-092 | ATP of MUS 4.0 - Enhanced PLA and PLF Cleaning |
| | NLSL-093 | ATP of MUS 8.0a - Test PLA for S/C Testing |
| | NLSL-098 | 3% Volume Buy Discount Application |
| | NLSL-092 | ATP of MUS 10.0 - SC Deposition |
| | NLSL-093 | ATP OF MUS 8.0b - Support for S/C Testing |
| | NLSL-093 | ATP of NSS 11.2a - Ultraviolet inspection |
| | NLSL-093 | ATP of NSS 11.2d - Tape Cleaning of PLF |

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| Contract Mod | Number | Description | | |
|-------------------------------|------------|---|-----------------|-------------------|
| | NLSL-086 | ATP of NSS 2.1d - Large Payload Fairing (LPF) | | |
| | NLSL-086 | ATP of MUS 2.0 - Interleaved Telemetry | | |
| | NLSL-086 | ATP of MUS 3.0 - SC GN2 Grade C Purge | | |
| | NLSL-086 | ATP of MUS 5.0 - Real Time Video | | |
| | NLSL-086 | ATP of MUS 6.0 - Mission Unique Flight Design and Analyses | | |
| | NLSL-086 | ATP of NSS 11.1b - Molecular Contamination Monitoring | | |
| | NLSL-086 | ATP of NSS 11.2c - Particulate Fallout Monitoring | | |
| | NLSL-106 | Adjust launch window to 10/28/08 - 10/30/08 | | |
| | NLSL-116 | Add second contingency launch window from November 25 - 27, 2008 | | |
| | NLSL-0126 | Add Clause 52.0 Special Agreement Regarding Damage to C-22 Flight Payload Adapter for LCROSS spacecraft for the LRO/LCROSS mission. | | |
| | NLSL-0131 | LRO/LCROSS Launch date adjustment from 10/28/08 to 11/24/08. | | |
| | NLSL-0134 | LRO/LCROSS Launch date adjustment from 11/24/08 to 02/27/09. | | |
| There are no LD Contract Mods | | | | |
| Task Assignments | Number | Description | Completion Date | Invoice Paid Date |
| | NLS-075 | LCROSS Mission Requirements Update (Centaur Long Duration Study/Analysis) | 05/31/2008 | 09/05/2008 |
| | NLS-076 | LCROSS SIL Testing | 05/31/2007 | 06/08/2007 |
| | NLS-077 | LCROSS Electrical Connector Development Test (DET) | 09/30/2007 | 10/01/2007 |
| | NLSB-173 | Nutation Time Constant Assessment | 1/13/06 | 1/31/06 |
| | NLSB-174 | Early Mission Integration Support | 11/30/06 | 1/31/06 |
| | NLSB-189 | DIV Launch Vehicle Models | 3/6/06 | 3/20/06 |
| | NLSL-067R2 | E-Field Level Analysis and LV Compatibility for LRO S-band Transmission in the Fairing | 10/31/2006 | 11/17/2006 |
| | NLSL-084 | LCROSS Electrical Connector 7-Pin Qualification | 09/30/2008 | |
| | NLSL-085 | Contamination Control Ground Support Equipment (GSE) | 11/30/08 | |
| | NLSL-095 | Additional Separation Analysis to Support LRO/LCROSS Mission | 08/31/2008 | |
| | NLSL-098 | LCROSS Mission Lugo for Centaur Upper Stage | 10/31/2008 | |

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| Task Assignments | Number | Description | Completion Date | Invoice Paid Date |
|----------------------------------|--|---|-----------------|-------------------|
| | NLSL-108R1 | LRO-LCROSS Launch Opportunities for March | 10/30/2008 | |
| | NLSL-115 | Security at Space Launch Complex 41 | 03/31/2009 | |
| There are no PPF Contract Mods | | | | |
| There are no Other Contract Mods | | | | |
| | Issues | | | |
| 0 | RFP for PPF Task order has been released; anticipate award in February 2008. | | | |
| 0 | Contract Mod for lengthening launch window is in work. | | | |
| 0 | This mission is designated as planetary and is subject to equitable adjustment, therefore grace days do not apply. | | | |



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LCROSS - Business

Harold Coleman

LAUNCH SERVICES PROGRAM

Budget

Contracts

Jul Aug Sep

| | | |
|---|---|---|
| G | G | G |
| G | G | G |

Milestone

Date

☐

Open Milestone
Payment

☐

Paid Milestone

Contract Status

Launch Services

| Contract Mod | Number | Description |
|--------------|----------|---|
| | NLSL-086 | ATP of Mission Unique Service (MUS) 11.0 for LCROSS |
| | NLSL-098 | 3% Volume Buy discount Application to MUS 11.0 |

There are no LD Contract Mods

| Task Assignments | Number | Description | Completion Date | Invoice Paid Date |
|------------------|----------|--|-----------------|-------------------|
| | NLSL-075 | Mission Requirements Update | 5/31/2008 | |
| | NLSL-076 | Software Integration Laboratory (SIL) Testing | 05/31/2007 | 06/08/2007 |
| | NLSL-077 | Electrical Connector Development Test | 09/30/2007 | 10/01/2007 |
| | NLSL-084 | Electrical Connector 7 Pin Qualification | 03/15/2008 | |
| | NLSL-085 | Contamination Control Ground Support Equipment (GSE) | 11/30/2008 | |

There are no PPF Contract Mods

There are no Other Contract Mods

There are no Issues.

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Center

LRO-LCROSS / LCROSS - Safety and Mission Assurance

Craig Schreiber

LAUNCH SERVICES PROGRAM

| Assurance Verification Areas | Status | | Evidence of Completion | | | |
|-------------------------------------|--------------------------|-------------------------------------|--|-----|-----|-----|
| | Complete | In Work | | Jul | Aug | Sep |
| Quality | | | | G | G | G |
| Software / Hardware Problems | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Reviewing impact of cracked isogrid found on AV-020 on LRO-LCROSS processing. Evaluating impact of clamp band manufacturing defect (MSL) on LRO-LCROSS | G | G | G |
| Alerts | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | G | G | G |
| Audits/Inspections/Surveillances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues. | G | G | G |
| Limited Life Items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | G | G | G |
| Reliability | | | | G | G | G |
| FMEA | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | G | G | G |
| Reliability Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | G | G | G |
| Safety | | | | G | Y | G |
| Requirements Definitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | G | G | G |
| Range Safety & Mission Flight Rules | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | G | G | G |
| Licenses/Use Authorizations | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant issues being tracked. | G | G | G |
| Safety Documentation | <input type="checkbox"/> | <input checked="" type="checkbox"/> | LRO MSPSP is under review. | G | G | G |
| Non-compliances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | None identified to date. Safety team has developed two acceptable scenarios to resolve LRO req'd fuel sampling concerns. | Y | Y | G |
| Contingency Planning | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Working to identify specific contingency and data impound responsibilities based on LCROSS handoff. | G | G | G |
| Mission Assurance | | | | Y | Y | Y |
| Lessons Learned | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |
| First Flight/Mission Unique items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Evaluating in excess of ten FF/FU items. | G | G | G |
| Test/Qualification/Certification | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues at this time. | G | G | G |
| Mission Assurance Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Schedule pressure warrants monitoring of RL10 RTF of OIV/FIVs. Additionally, Fleet concerns exist over RD-180 Mixture ratio valve that failed on AV017 and TVC actuator that performed an uncommanded movement on AV014. | Y | Y | Y |
| Risk Management | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No significant documented issues being tracked. | G | G | G |

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LRO-LCROSS / LCROSS Comm & Telemetry

Mike Patton and Mike Patton

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

| Jul | Aug | Sep |
|-----|-----|-----|
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

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LCROSS Comm & Telemetry

Mike Patton and Mike Patton

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

Jul Aug Sep

| | | |
|---|---|---|
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |
| G | G | G |

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

Jul Aug Sep

| | | |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

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SDO Project Summary

OVERALL MISSION

| Jul | Aug | Sep |
|-----|-----|-----|
| Y | Y | Y |

LAUNCH SERVICES PROGRAM



| | |
|----------------------|----------------|
| Mission | SDO |
| Launch Date | 2010/01/26 |
| Launch Vehicle | Atlas V |
| Launch Period Window | |
| PPF | Commercial PPF |

MISSION MANAGEMENT

| | Jul | Aug | Sep |
|---------------------|-----|-----|-----|
| Observatory Status | G | G | G |
| Manifest/Range | Y | Y | Y |
| Integrated Schedule | G | G | G |
| ICD | G | G | G |
| CDRLs (S/C & LSC) | G | G | G |

LAUNCH SITE

| | Jul | Aug | Sep |
|--------------------|-----|-----|-----|
| LSSP | G | G | G |
| Customer Inputs | G | G | G |
| PPF | Y | G | G |
| Launch Site Unique | G | G | G |
| Spacecraft OPS | G | G | G |

SAFETY & MISSION ASSURANCE

| | Jul | Aug | Sep |
|-------------------|-----|-----|-----|
| Mission Assurance | G | G | G |
| Safety | G | G | G |
| Quality | Y | Y | Y |
| Reliability | G | G | G |

ENGINEERING

| | | | |
|---------------------|-----|-----|-----|
| Launch Vehicle | G | G | N/A |
| Mission Specific | G | G | G |
| Certification | N/A | N/A | N/A |
| Mission Analysis | G | Y | Y |
| ERS/ERB | G | G | G |
| Launch PAD/GSE | G | Y | Y |
| Mission Unique IV&V | N/A | N/A | N/A |

COMM & TELEMETRY

| | Jul | Aug | Sep |
|----------------|-----|-----|-----|
| Communications | G | G | G |
| Telemetry | 0 | 0 | 0 |

BUSINESS

| | Jul | Aug | Sep |
|-----------|-----|-----|-----|
| Budget | G | G | G |
| Contracts | Y | R | R |

LEGEND

Proceeding on Plan
 Area of Concern
 Significant Problem
 Not Evaluated
 Not Applicable

| |
|-----|
| G |
| Y |
| R |
| 0 |
| N/A |

DOWNRANGE TELEMETRY

| | | | |
|-----------------|---|---|---|
| Ground Stations | 0 | 0 | 0 |
| Deployables | 0 | 0 | 0 |
| P-3/OTTR | 0 | 0 | 0 |

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SDO - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

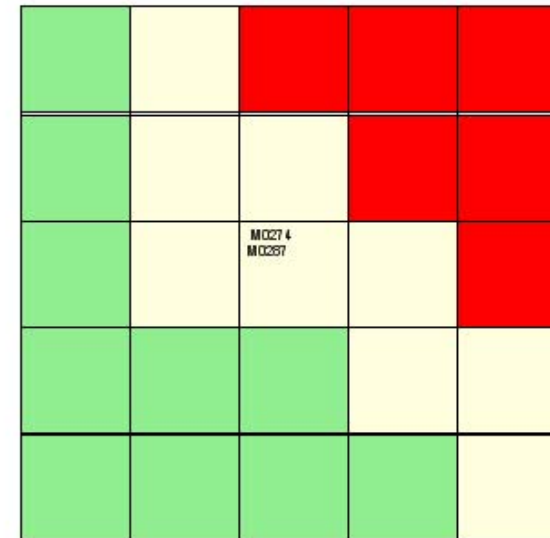
| | | Condition |
|-----|--------|---|
| RYG | RiskID | Consequence |
| 0 | M0274 | Atlas V RP-1 Tank Qual Testing delays have occurred, more expected. |
| | | RP Tank may not be qualified in time to support systems review. |
| 0 | M0287 | PPF Conflict. Three spacecraft (STSS Demo, LRO, SDO) are scheduled for processing at ASO in a common timeframe. Each mission requires an LFE (Laminar flow enclosure). However, there are only two LFE's available. |
| | | Depending upon manifest decisions, one of these three missions (perhaps SDO) will require a delay to shipping / ASO processing start until a processing highbay with LFE becomes available. |

P
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C
E

5
91-
100%
4
51-90%
3
11-50%
2
6-
10%
1
1-5%



1 2 3 4 5
IMPACT



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SDO - Significant Events

LAUNCH SERVICES PROGRAM

| Accomplished | |
|---------------------------------------|-----------------------|
| Procurement/ ATP | 29 Sep 04 |
| SDO CDR @ GSFC | 5 Apr 05-7 Apr 05 |
| SDO Adapter to LMSSC Tooling Fitcheck | 12 Jan 06 |
| Test PLA/SC Test unit fitcheck @ GSFC | 18 Jul 06 |
| MIWG @ LM/Denver | 24 Oct 06-25 Oct 06 |
| GOWG @ Astrotech | 11 Oct 06-12 Oct 06 |
| Initial CPWSR delivered | 10 Aug 06-7 Feb 07 |
| Baseline ICD signed | 1 Dec 06-8 May 07 |
| SC Propulsion Module Sine Vibe Test | 15 Oct 07-17 Oct 07 |
| MIWG @ GSFC | 18 Sep 07-19 Sep 07 |
| GO TIM @ ASO | 12/05/2007-12/05/2007 |
| Updated CPWSR | 11 Dec 07-17 Jun 08 |
| MIWG #6 @ Denver | 28 Feb 08-28 Feb 08 |
| SDO Pre-environmental Review @ GSFC | 3/19/08-3/20/08 |
| SDO EMI/EMC Environmental test plan | 12 Feb 08 |
| Mate the Test PLA @ GSFC | 28 Apr 08 |
| Demate the Test PLA @ GSFC | 3 May 08 |
| Re-Mate the Test PLA @ GSFC | 22 May 08-23 May 08 |
| SC Sine Vibe Testing | 27 May 08-2 Jun 08 |
| Shock Test and Matchmate | 5 Jun 08-6 Jun 08 |
| MPDR @ Denver | 17 Jun 08 |
| SC Thermal Vac Complete | 15 Jul 08-16 Aug 08 |

| Planned | |
|--------------------------|---------------|
| MIWG #7 / GOWG #3 @ VAFB | OCT 28-OCT 29 |

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SDO Mission Management

Rex Engelhardt

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

| |
|----------------|
| SDO |
| 2010/01/26 |
| GTO |
| Atlas V |
| |
| Commercial PPF |
| 3200 Kg |
| SLC 41 |

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| Y | Y | Y |
| G | G | G |
| G | G | 0 |
| G | G | 0 |
| G | G | 0 |
| G | G | 0 |

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

| |
|--------------------|
| GSFC |
| Living With a Star |
| Liz Citrin |
| Kevin Hughes |
| Rex Engelhardt |
| Eric Poole |
| Dianna Lampert |
| Benjamin Studenski |
| Bob Henry |
| Robert McEntire |
| Marty Loughheed |



ICD

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| G | G | G |
| Y | Y | Y |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |

| SIGNED SCNS: | | SCNS IN REVIEW | |
|------------------------------------|-------------|---|-------------|
| SCN # | DATE SIGNED | SCN # | DATE SIGNED |
| SDO Atlas V ICD (Rev -) | 05/08/2007 | 002 (3.3.5, EMC) | |
| 001 (3.4 Flt Design) | 08/09/2007 | 003 (Elec Interfac es) | |
| 004 (3.3.1.1 SC Thermo l) | 08/09/2007 | 008 (3.3.2.6 SC Inst GN2 Purge) | |

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| | | | |
|---|------------|--|--|
| 005 (Table 4-1 Ver Matrix) | 02/28/2008 | 009 3.1.3 (Mass Props) | |
| 006 (Appen dix B: EICD) | 03/13/2008 | 011 3.3.2 & 3.5.5.1 (Conta minatio n) | |
| 007 (3.1.2.3 Strengt h) | 04/15/2008 | 012 Append ix A: MICD | |
| 010 3.3.5.2. 4 (Launch Site RF Environ) | 03/13/2008 | 014 3.6 (Safety Require ments) | |
| 016 3.3.4.2 (Acousti cs) | 04/28/2008 | 015 3.3.5.4 (Therm al Blanket ESD) | |
| 017 3.1.2.2 SC Interfac e Loads | 04/15/2008 | 018 3.5.5.1 SC Bus Dedicat ed Ventilati on | |
| 013 3.4.4.1 & 3.4.4.2 Flight Design Update s | 05/07/2008 | 019 4.0 General Update s | |
| | | 020 3.3.5.5 RF XMTR/ RCVR Sys EMC | |

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SDO - Engineering

Eric Poole

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|--------------------------------|-----|-----|-----|
| Launch Vehicle | G | G | N/A |
| Payload Fairing | G | G | N/A |
| First Stage | G | G | N/A |
| Second Stage | G | G | N/A |
| Third Stage | N/A | N/A | N/A |
| Payload Attach Fitting | G | G | G |
| Other | G | G | G |
| Mission Specific | G | G | G |
| Certification | N/A | N/A | N/A |
| Mission Analysis | G | Y | Y |
| ERS/ERB | G | G | G |
| Launch PAD/GSE | G | Y | Y |
| Mission Unique IV&V | N/A | N/A | N/A |

| REQUIREMENT VERIFICATION STATUS | |
|---------------------------------|---|
| NUMBER OF REQUIREMENTS | 0 |
| VERIFIED TO DATE | 0 |

| LAUNCH PAD / GSE MODS (IF APPLICABLE) |
|---|
| Drag on cooling required. TBD cart capabilities (cleanliness, pwr, elec, cooling) |

| MISSION UNIQUE STUDIES (IF APPLICABLE) |
|--|
| There are none. |

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SDO - Mission ERB Status

Eric Poole

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|------------|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| 0 | ERS-06-335 | SDO Solar Array Deployment Immediately at Separation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| G | ERS-06-378 | Solar Dynamics Observatory (SDO) ICD Review | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-363 | Atlas V Lightning Suppression Assemblies for Payload | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 08-071 | SDO MPDR | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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SDO - Vehicle ERB Status

Eric Poole

LAUNCH SERVICES PROGRAM

| R/Y/G | ERS # | TITLE | ERB Req? | | Board Held? | | | Closure | | |
|-------|------------|---|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| | | | Y | N | Y | N | N/A | AI | ENG. | OCE |
| G | ERS-05-196 | Atlas V - Thermal Assessment and Redesign of Single Pneumatics Panel [long coast] | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | ERS-06-305 | Atlas V - Booster RP Tank / Atlas V RP Tank Long Term Redesign | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | 07-204 | AV009 Centaur Performance Evaluation | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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SDO - Launch Site

Dianna Lampert

LAUNCH SERVICES PROGRAM

| | Jul | Aug | Sep |
|-------------|-----|-----|-----|
| LSSP | G | G | G |

| | | |
|-------------|------------|----------|
| LSSP | Planned | Released |
| Preliminary | 03/27/2007 | 4/2007 |
| Baseline | 09/26/2008 | |

| | Jul | Aug | Sep |
|------------------------|-----|-----|-----|
| CUSTOMER INPUTS | G | G | G |

| | Jul | Aug | Sep |
|-----------------------------|-----|-----|-----|
| DELIVERABLES | | | |
| Security and Badging | G | G | G |
| Training and Personnel Cert | G | G | G |
| Contingency Plans | G | G | G |
| Safety LSIM | G | G | G |
| Radiation Control | G | G | G |
| Operational Plans | G | G | G |

UNIQUE REQUIREMENTS

| | Jul | Aug | Sep |
|---------------------------|-----|-----|-----|
| LAUNCH SITE UNIQUE | G | G | G |

| | | | |
|----------------|---|---|---|
| PPF | | | |
| Astrotech | Y | G | G |
| 10K Clean Room | Y | G | G |
| | G | G | G |

| | | | |
|-----------------------|---|---|---|
| Spacecraft OPS | G | G | G |
|-----------------------|---|---|---|

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SDO Budget Breakdown

Benjamin Studenski

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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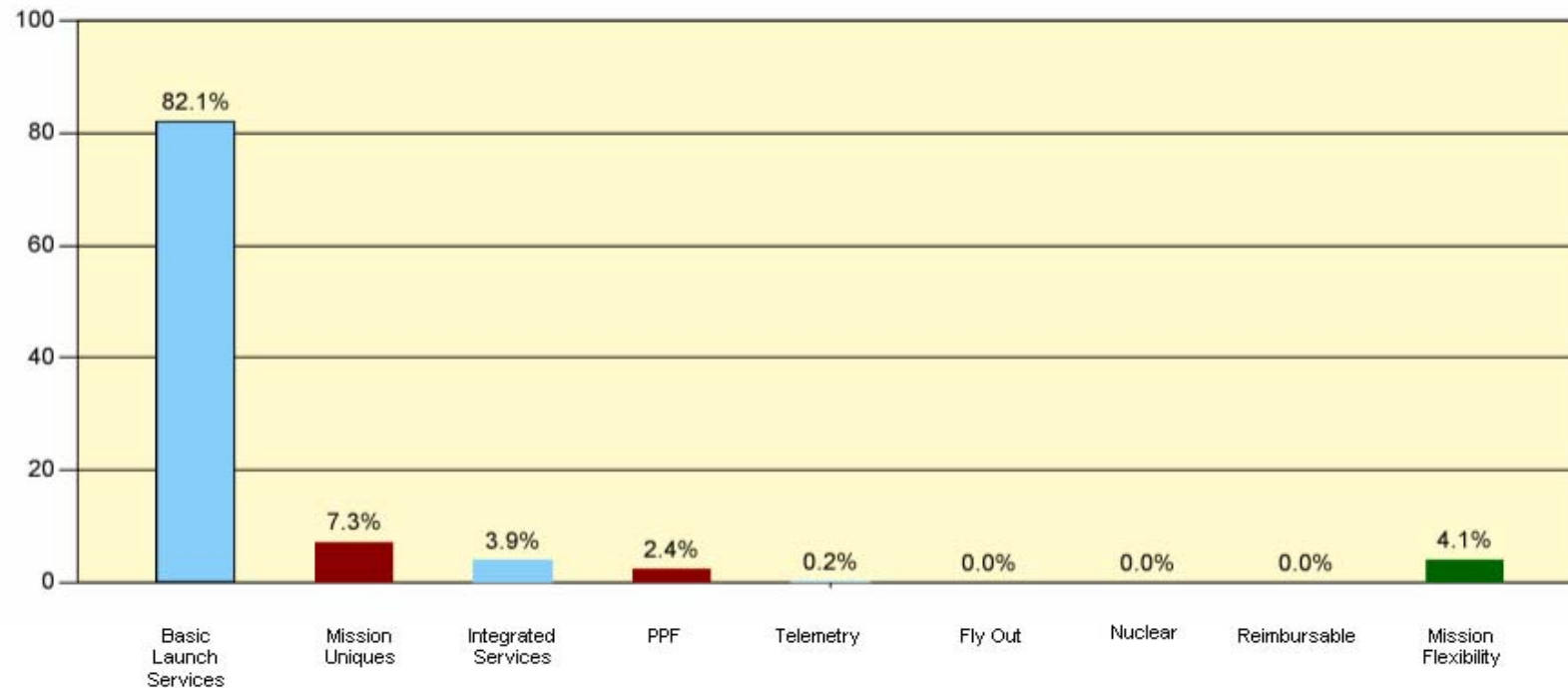
Launch Services Budget Breakdown

SDO Mission

Benjamin Studenski

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 9 / 2008



- No flexibility; cost are fixed
- Limited Flexibility depending on spacecraft requirements
- Flexible portion of budget

Notes:

No grace days or penalty days remain. All future launch delays of SDO are subject to equitable adjustment claims by the contractor.

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SDO - Business

Benjamin Studenski

LAUNCH SERVICES PROGRAM

Budget

Contracts

| Jul | Aug | Sep |
|-----|-----|-----|
| G | G | G |
| Y | R | R |

| Milestone | Date |
|----------------|----------|
| Milestone 1A | 09/29/04 |
| Milestone 1B | 03/15/05 |
| Milestone 1C | 11/15/05 |
| Milestone #2 | 05/01/06 |
| Milestone #3 | 08/01/06 |
| Milestone #4 | 11/01/06 |
| Milestone #5 | 02/01/07 |
| Milestone #6 | 05/01/07 |
| Milestone #7 | 08/01/07 |
| Milestone #7A | 11/14/07 |
| Milestone #8 | 11/14/07 |
| Milestone: #9 | 6/1/2008 |
| Milestone: #10 | 05/01/08 |
| Milestone #11 | 08/01/08 |

| | |
|--------------------------|---------------------------|
| <input type="checkbox"/> | Open Milestone Payment |
| <input type="checkbox"/> | Paid Milestone |

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| Contract Status | | | | |
|----------------------------------|--|--|-----------------|-------------------|
| Launch Services | | | | |
| Contract Mod | Number | Description | | |
| | 038 | Original ATP Launch Date 4/15/2008 | | |
| | 135 | Cancellation of NSS 11.3a Bagged PLF | | |
| Contract Mod (LD) | Number | Description | | |
| | 067 | Launch date change from 04/15/2008 to 8/1/2008 | | |
| | 113 | Launch date change from 04/15/2008 to 8/1/2008 Equitable Adjustment settlement | | |
| | 135 | Launch date change from 8/1/2008 to 1/26/2010 | | |
| Task Assignments | Number | Description | Completion Date | Invoice Paid Date |
| | 028 | Coupled Load Analysis (CLA) Report | 09/14/2004 | 10/28/2004 |
| | 066 | SDO Trajectory Optimization | 10/06/06 | 11/17/2006 |
| | 082 | Transient Voltage Suppression | 12/20/2008 | |
| | 088R1 | Separation Attitude Study | 03/28/2008 | 5/12/2008 |
| | 100 | De-Mate Payload Adapter and Clampband | 05/04/2008 | 06/24/2008 |
| | 103 | Encapsulated Hoist GN2 Purge | | |
| | 104 | Re-mate of the Test Payload Adapter | 05/24/2008 | 07/19/2008 |
| | 111 | Roof-mounted RF Monitoring at SLC-41 | 12/12/2008 | |
| | 117 | West Coast Range Safety Assessment | 11/14/2008 | |
| Contract Mod (PPF) | Number | Description | | |
| | NNK06LB20B | ATP Commercial Payload Processing Task Order | | |
| There are no Other Contract Mods | | | | |
| | Issues | | | |
| R | Current contractual launch date is 8/1/2008. Awaiting ULA acceptance of a proposed 1/26/2010 launch date while protecting a 6/2009 launch attempt. | | | |



John F. Kennedy Space
Center

SDO - Safety and Mission Assurance

Bob Henry

LAUNCH SERVICES PROGRAM

| Assurance Verification Areas | Status | | Evidence of Completion | | | |
|-------------------------------------|--------------------------|-------------------------------------|---|-----|-----|-----|
| | Complete | In Work | | Jul | Aug | Sep |
| Quality | | | | Y | Y | Y |
| Software / Hardware Problems | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Monitoring RD-180 issues, and FM/OIV investigation. | Y | Y | Y |
| Alerts | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No GIDEPS at this time. | G | G | G |
| Audits/Inspections/Surveillances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Beginning to attend MSRs for SDO. No issues at this time. | G | G | G |
| Limited Life Items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues. | G | G | G |
| Reliability | | | | G | G | G |
| FMEA/Fishbones/Equivalent | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No FMEA/Fishbones/Equivalent have been identified. | G | G | G |
| Reliability Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Reliability data gathering in work | G | G | G |
| Safety | | | | G | G | G |
| Requirements Definitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | EWR 127-1 Tailoring In Work | G | G | G |
| Range Safety & Mission Flight Rules | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |
| Licenses/Use Authorizations | <input type="checkbox"/> | <input checked="" type="checkbox"/> | in work | G | G | G |
| Safety Documentation | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Reviewing preliminary MSPSP | G | G | G |
| Non-compliances | <input type="checkbox"/> | <input checked="" type="checkbox"/> | None identified to date | G | G | G |
| Contingency Planning | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Deliver by SARR | G | G | G |
| Mission Assurance | | | | G | G | G |
| Lessons Learned | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |
| First Flight/Mission Unique items | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |
| Test/Qualification/Certification | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |
| Mission Assurance Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |
| Risk Management | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No issues | G | G | G |

September 18, 2008

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